AGUSTA

DOA HANDBOOK

Issue T - June 1, 2011

DOC. N° C750-02

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DOA

HANDBOOK

DOC. N° C750-02

ISSUE T **DATE: June 1, 2011**

This Handbook defines the organization and the procedures of Agusta S.p.A. for the Design Organization Approval by EASA, in compliance with Regulation EC n. 1702/2003 Part 21 and relevant amendments.
The undersigned assures the strict observance of the provisions of this Handbook in the design activities.
The approval by the Agency of this Handbook does not relieve the Agusta Design Organization from the obligation to comply with any subsequent, updated requirement.
The Agency personnel, as applicable, are allowed to make investigations, including those with partners and/or subcontractors, as deemed necessary to determine compliance with the applicable regulations of Part 21 Subpart J.
The Agency may restrict, suspend or revoke the Agusta Design Organization Approval under the conditions described in Part 21A.259.
The undersigned declares that, under the Italian laws, he is in possession of all the authorizations required to conduct the activities of the Design Organization.

The undersigned declares also that, effective from June 1, 2011, the name AgustaWestland SpA has been filed in the Companies' House to replace in full the previously registered name Agusta SpA. No other change affects the organization: all fulfillments and legal obligations, as well as the DO approval and the privileges granted to Agusta SpA, will be retained and exercised by the same Company as AgustaWestland SpA.

All reference to Agusta in this DOA Handbook and related procedures are therefore to be intended as relevant to AgustaWestland.

Fabio Nannoni

Engineering Director
Head of Design Organization

Bruno Spagnolini

The CHIEF EXECUTIVE
of the AgustaWestland DESIGN ORGANIZATION

Cascina Costa, 01/06/2011

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PART I

GENERAL

DOC. N° C750-02-001

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ISSUE STATUS AND APPROVAL

ISSUE	DESCRIPTION	
A	First issue	Prepared PG.Colombo Date 01/12/00 Checked P.Alli Date 01/12/00 Approved M. Pellerei Date 04/12/00
B	Updating on the historical back ground, on the Agusta share holder, on the Agusta organization and on the DOA renewal	Prepared P. G. Colombo Date 21/12/01 Checked P. Alli Date 21/12/01 Approved A. Gustapane Date 21/12/01
C	Added reference to the applicable regulation and legislation taken from C750-02-003.9 Updating on the procedures for Design Organization Approval, renewals and management of changes to the Design Assurance System following the deletion of document n. 100-50-159. Various improvements of wording	Prepared P. G. Colombo Date 20/01/03 Checked P. Alli Date 20/01/03 Approved G. Orsi Date 20/01/03
D	Modifications incorporated to refer to EASA and to the EC regulation part 21 requirements. Updating to the historical background and to the industrial scenario. Improvements to the wording for better document readability.	Prepared P. G. Colombo Date 20/01/04 Checked P. Alli Date 20/01/04 Approved G. Orsi Date 20/01/04
E	Updating for a better description of DOA Transferability and Change to Terms and Approval. Updated references to UNI EN ISO 9001:2000. Introduction of the environmental protection concepts for compliance with EASA Part 21.	Prepared P. G. Colombo Date 06/09/04 Checked P. Alli Date 06/09/04 Approved G. Orsi Date 07/09/04
F	Updating of the historical back ground and industrial scenario, for a better definition of the DOA validity and of the significant changes to the DAS, in accordance with Part 21 and related AMC/ GM.	Prepared P. G. Colombo Date 01/02/05 Checked G. Monti Date 01/02/05 Approved B. Spagnolini Date 01/02/05

ISSUE	DESCRIPTION	
G	Introduction of updated terms of approval through the updated approval certificate provided in Appendix 1	Prepared P. G. Colombo Date 21/06/05 Checked G. Monti Date 21/06/05 Approved B. Spagnolini Date 21/06/05
H	Updating of the historical background for the transfer of the EH101 Type Certificates to Agusta and the related definition of the DOA Handbook Addendum 1. Updating of the DO Approval certificate	Prepared P. G. Colombo Date 16/09/05 Checked G. Monti Date 16/09/05 Approved B. Spagnolini Date 16/09/05
I	Updating of the referenced procedures	Prepared G. Gino Date 20/01/06 Checked G. Monti Date 30/01/06 Approved B. Spagnolini Date 30/01/06
J	Updating of the historical background for the introduction of the new trademark AW139 and for Agusta Westland Integration. Updating of the referenced certifications. Introduction of the reference to EASA form 82. Introduction of updated terms of approval through the updated approval certificate provided in Appendix A1	Prepared G. Gino Date 01/06/07 Checked G. Monti Date 07/06/07 Approved B. Spagnolini Date 11/06/07
K	Updating of the definition of the DAS significant changes for the introduction of the procedures related to approval of the Flight Conditions and issue of the Permit to Fly.	Prepared G. Gino Date 20/11/07 Checked G. Monti Date 20/11/07 Approved B. Spagnolini Date 20/11/07
L	Introduction of updated terms of approval through the updated approval certificate provided in Appendix 1 Updating of the Agusta Spa reference. Introduction of the reference to EASA Form 82 for Agency approval of changes to Terms of Approval. Updating of military certification reference.	Prepared G. Gino Date 30/06/08 Checked G. Monti Date 09/07/08 Approved B. Spagnolini Date 11/07/08

ISSUE	DESCRIPTION	
M	Not significant changes: • Updating the applicant contact information • Updating the name of referenced procedures. • Clarification about the structures and management of the Handbook (ref. par. 8) • Contact information for the Office of Airworthiness added. • Brief helicopters description added (ref. Appendix 2).	Prepared G. Gino Date 08/02/10 Checked F. Nannoni Date 08/02/10 Approved B. Spagnolini Date 08/02/10
N	Not significant changes: • Updating the name of referenced procedures. • Introducing of A109N description in App. 2	Prepared G. Gino Date 28/02/11 Checked F. Nannoni Date 28/02/11 Approved B. Spagnolini Date 28/02/11
O	Significant changes: • Introduction of updated terms of approval	Prepared G. Gino Date 6/4/11 Checked F. Nannoni Date 6/4/11 Approved B. Spagnolini Date 21/4/011

REFERENCES

EC regulation n. 1702/2003 part 21 (Certification of aircraft and related products, parts and appliances and of design and production organization)

AQM-001 Manuale della Qualità

C750-02-002 The Design Assurance System

C750-02-003.9 List of DAS procedures

AWEOS011 Panagon User Manual

DEFINITIONS

Applicant
In this Handbook means a “Person” applying for a Design Organization Approval (DOA) under the applicable regulation.

Design Assurance System (DAS)
Is the organizational structure, responsibilities, procedures and resources to ensure the proper functioning of the Design Organization.

Person
Is a legal entity, which is subject to the jurisdiction of an EU country; it can include an Organization or Company.

Product
Means an aircraft, aircraft engine or propeller.

1 THE APPLICANT

The applicant for approval as a Design Organization is "**Agusta, S.p.A.**" having its legal address at:

Agusta SpA
Via Giovani Agusta, 520
21017 Cascina Costa di Samarate (VA) Italy
Tel.: +39 0331-229401 – Fax: +39 0331-229046
Email : Fabio.Nannoni@agustawestland.com

The generic term Agusta will be used in this manual with the meaning here above defined.

2 HISTORICAL BACKGROUND

The origin of Agusta dates back to the beginning of XX Century when a small group of pilots laid the foundations for the development of an Italian aeronautical industry.
Its founder, Giovanni Agusta, flew his first airplane in 1907 and from 1923 onwards the company was active in the design, production and maintenance of fixed wing aircraft.
Agusta entered the world of vertical flight in 1952 after signing an agreement with the American Company Bell to produce their helicopters under license. Similar agreements were reached in the '60s with the other major US manufacturers: Sikorsky, Boeing and Mc Donnel Douglas.
Agusta did not limit itself to production under license: starting from this experience, and in a relatively short time, independent research and development capabilities were created. The numerous projects and the experimental work carried out at the end of the '50s led to the construction of no less than nine prototypes, all flight tested with success. The innovations associated with two of these models, the A101G and the A106, allowed Agusta to enter, as a full member, the restricted club of companies capable of independent helicopter design.
Agusta's place amongst the leaders in vertical flight was secured in 1971 with the first flight of the A109 twin turbine helicopter, a design with innovative features and high performance that was developed entirely at Cascina Costa. This model is still in production in the new versions developed later. Many hundreds of its civil, military and public utility variants have been manufactured: the universal reputation it enjoys is a demonstration of Agusta's command of helicopter technological know-how.
The next stage in Agusta's development of helicopter technology was reached subsequently in 1983 with the first flight of the A129 Mangusta anti-tank helicopter, the first attack helicopter to be designed and produced wholly in Europe, which demonstrated Agusta's capability to satisfy the most complex technical requirements.
The success of these models opened up for Agusta the road of cooperation with other European helicopter manufacturers in joint projects.

In 1981 the design of the EH101 was initiated, in line with the requirements of the Italian and British navies. The civil versions of the EH101 then got simultaneous TCs in 1994 by ENAC and UK CAA and shortly afterwards by FAA, thanks to the joint efforts of Agusta and Westland.
1985 saw the launch, in collaboration with the aeronautic industries of France, Germany and the Netherlands, of the program for the development of the NH90, a twin engine multi-role helicopter of 9 tons which will meet the medium helicopter requirements of these countries' armed forces.
In 1994 Agusta's own products range was widened with the introduction of the single turbine A119 Koala and the twin turbine A109E Power, products that opened a new chapter in the Company's history.
Since October 96, a design Assurance System has been established within the Agusta Design Organization with the mission to improve safety and quality of their products.
In 1998 two new projects have been launched in partnership with BHTI: the AB139 and the BA609.
In June 2003 the AB 139 got his first Type Certification from ENAC and in December 2004 from the U.S. FAA.
In September 2003, the new European aviation Agency (EASA) started their activity as the unique entity in charge for the certification of the aeronautical products and of the related industrial organizations within the EU member states.
In the occasion of the last renewal (January 26, 2004), the former ENAC Design Organization Approval was granted to Agusta by EASA.
Following the entry into force of the EASA Part 21 and the related superseding of the former regulations on company approvals, the existing EH101 Type Certificates have been transferred in 2005 from AWIL Company (former EHI) to Agusta S.p.A.
In September 2006 Agusta changed the AB139 trademark into AW139 for commercial reasons. This trademarks identify two batches of aircraft manufactured in conformity with a unique Type Certification Data Sheet.
Since June 2006 a new project started for the integration of the different entities forming AgustaWestland. As a visible step forward, on March 2007 both the engineering departments of Agusta and WHL have been organized into one single AW Integrated Engineering, while still maintaining two separate legal entities. Agusta SpA remains the DOA EASA.21J.005 holder and the Type Certificates holder of the products listed in the current Terms of Approval.

3 PRESENT INDUSTRIAL SCENARIO

Following the acquisition by Finmeccanica of GKN's shareholding in the AgustaWestland Company, in the fall of 2004 the latter reinforced their capability to provide strategic direction and leadership to the controlled Companies and to pursue the mission of being the global leader in the rotorcraft industry.
The Agusta S.p.A. shares are totally owned by the AgustaWestland Company.
In order to support these activities, Agusta is committed in continuously improving the integration and quality of their processes, which are distributed over six major sites in Italy, each one being committed to excellence in the assigned technical field.

Also, Agusta S.p.A. has the full control of:

- Agusta Aerospace Corporation located in Philadelphia U.S.A. that is in charge for marketing and customizations of the Agusta products in America
- Agusta Aerospace Services located on the Liege airport, Belgium that is in charge of Customer service for the Agusta products in Europe.

Agusta S.p.A., together with Westland Helicopter Ltd, have the control of Agusta Westland International Limited (AWIL, formerly EHI) located in Farnborough, U.K. that is in charge of the management of the military EH101 helicopters.

Agusta S.p.A., together with BHTI, share the Bell Agusta Aerospace Corporation (BAAC) located in Fort Worth, Texas, U.S.A., in charge for development and certification of the BA609.
Finally, even though not oriented to the civil market, it is worth to mention that Agusta S.p.A., together with Eurocopter, Eurocopter Germany, Fokker, have the control of NHI, a Company located in Aix en Provence, France that is in charge of design, development, qualification, marketing, and product support of the NH90 helicopter.

4 THE AGUSTA QUALITY SYSTEM AND CERTIFICATIONS

Agusta has a single Quality System; the Agusta overall organization is provided in the Sistema di Gestione per la Qualità: AQM-001.
According to civil aviation requirements however, the company has dedicated organizations for Design, Production, Maintenance and training.
These Organizations and related procedures are laid down in the Agusta documents n.: C 750-02 (DOA Handbook), C 750-01 (Production Exposition), C 750-03/-04/-05/-07 (Maintenance Expositions), C 750-08 (MOT exposition), C 750-09 (TRTO exposition) which are related to AQM-001.

The Agusta "Design Organization" structure and the responsibilities of those in charge for the Airworthiness of the projects quoted under the terms of approval, are defined under the Part II of the DOA Handbook (ref. C750-02-002).

The "Amministratore Delegato" of Agusta S.p.A. (Chief Executive Officer), is the Agusta Chief Executive (CE) for the purpose of the Design Organization Approval.

Agusta to date holds the following approvals:

- Amministrazione Difesa Italiana
  - Norma AER-Q-2110 (AQAP-2101, AQAP-2210)
  - Certificato n. 605
- Ente Nazionale per l'Aviazione Civile
  - Certificato RAI-G-007 per Impresa di Produzione secondo la Norma JAR 21Subpart G.
  - Certificati RAI n. 221, 226, 227, 276 per Approvazione per la manutenzione secondo JAR 145
  - Certificato n. ENAC 002 per la organizzazione di addestramento di Somma Lombardo
  - Certificato JAR FCL n. I/TRTO/002 per l'addestramento e le abilitazioni di tipo
  - Certificato n. U36Y111D di approvazione per "Repair Station" secondo FAR 145
- UNAVIA Cert
  - Regulation UNI EN ISO 9001:2000 for design, development and manufacturing of helicopters, Certificate n. 100A
  - Regulation UNI EN 9100:2003 (UNI EN 9100:2005) for design, development and manufacturing of helicopters, Certificate n. 100

5 APPLICABLE REGULATION AND LEGISLATION FOR DOA

The regulation and legislation applicable to the Agusta Design Organization Approval is now the European Commission Regulation (EC) N. 1702/2003 Part 21.
This regulation has been analyzed and the relevant requirement are implemented through the DOA Handbook and related procedures.
The Agusta DOA Handbook and all the referenced procedures are binding instruction for all the personnel of the Agusta Design Assurance System.

6 POLICY FOR DOA

Agusta is committed to ensure for their products that:

- their design, changes, repairs thereof, comply with the applicable requirements and have no unsafe features;
- information are collected, investigations carried out and corrective measures identified for failures, malfunctions and defects;

on the basis of the recognized capability of the Design Organization:

- to design in compliance with the airworthiness and environmental protection requirements
- to verify, by itself, the compliance
- to demonstrate to the Authority this compliance
- and in general to act in conformity with appropriate procedures

The above is implemented through the establishment of a Design Assurance System.

The Design Organization Approval imposes obligations and grant privileges to its holder.

Agusta is committed to achieving in an effective and traceable way the best level of confidence from the Authority on the capability of the Design Assurance System to ensure proper functioning of the Design Organization.
This is intended to maximize both the level of safety of the products and the efficiency of the overall resources as requested by the market challenges.
This objective will be pursued by all the responsible persons identified in this Handbook and following the procedures of this Handbook.

6.1 The Design Assurance System consists of:

- the organizational structure of the Design Organization;
- the definition of the responsibilities assigned to the persons, within the Design Organization, making decisions affecting airworthiness;
- the procedures applicable to this system;
- the human resources provided to the design organization.

6.2 The main tools of the Design Assurance System are:

- management and coordination of airworthiness, independent verification of compliance with the airworthiness and environmental protection requirements by the Office of Airworthiness;
- independent verification of the effectiveness of the organization by the System Monitoring function.

6.3 Design assurance main tasks

The Design Assurance process is implemented through systematic actions addressing all significant aspects of the design and focused on ensuring compliance with the airworthiness and environmental protection requirements. Such systematic actions include:
- control of the correct application of the instructions contained in the Handbook;
- liaison with the Airworthiness Authority (AA) for all issues related to airworthiness aspects;
- conduct of Type Investigation and approval process of modifications in accordance with investigation programs and following methods of compliance agreed with the AA;
- approval of compliance reports, upon control and verification of compliance, by signature of the nominated persons;
- ensuring conformity of prototypes and test specimen to the applicable design data;
- ensuring preparation and updating of all maintenance and operating instructions;
- control of subcontractors;
- qualification of equipment designed by subcontractors;
- coordination with production through agreed procedures;
- management of continued airworthiness actions through procedures involving Production and Product Support.

7 APPLICATION FOR DOA, VALIDITY AND MANAGEMENT OF CHANGES TO THE DAS

The application for DOA is submitted to the Agency through a formal letter signed by the Chief Executive including an outline of the DOA Handbook.
The Agency issues the Design Organization Approval when they are satisfied that compliance has been shown with the applicable requirements.

7.1 Validity

A Design Organization approval is issued for an unlimited duration. It shall remain valid unless:

1. The Design Organization fails to demonstrate compliance with the applicable requirements of this Subpart; or
2. The Agency is prevented by the holder or any of its partners or subcontractors to perform the investigations in accordance with the applicable regulation, or
3. There is evidence that the design assurance system cannot maintain satisfactory control and supervision of the design of products or changes thereof under the approval; or
4. The certificate has been surrendered or revoked under the applicable administrative procedures established by the Agency.

Upon surrender or revocation, the certificate is returned to the Agency.

7.2 Change to Design Assurance System

After the grant of DOA, each change to the Design Assurance System that is **significant** to the showings of compliance or to the airworthiness and environmental protection of the product, shall be approved by the Agency.
The application for approval of a significant change to the Design Assurance System is submitted in writing to the Agency through EASA form 82 signed by Chief Executive or authorized representative, together with the proposed changes to the Handbook and/or the related procedures. (EASA Form 82 is available in the EASA website).
Before implementing the significant change, the Design Organization shall demonstrate to the Agency, on the basis of proposed changes to the Handbook, that it will continue to comply with the applicable regulation after implementation.
All non-significant changes are implemented directly by the Design Organization and the relevant information is provided to the Agency.

The Office of Airworthiness is responsible to co-ordinate the process leading to the grant of the Design Organization Approval. The Office of Airworthiness is also responsible to classify the changes to the Design Assurance System and to co-ordinate their approval, as appropriate.

The DAS changes are classified on the basis of the following guidance.

A1) SIGNIFICANT CHANGES: those changes significant to the showing of compliance or to the airworthiness and environmental protection of the product; this definition includes:

A1.1 Organization as defined in C750-02-001 and -002:

- Change in ownership (see para 7.3)
- Relocation to new premises
- Change in the industrial organization (partnership, suppliers, design work-sharing) unless it can be shown that the independent checking function of the showing of compliance is not affected
- Change in the parts of the organization that contribute directly to the airworthiness or environmental protection (independent checking function, office of airworthiness)
- Change in the independent monitoring principles

A1.2 Responsibilities as defined in C750-02-002:

- Changes of the management staff:
  - the Head of design organization and his deputies (Chief Project Engineers)
  - the Chief of the Office of Airworthiness
  - the Chief of independent monitoring function of design assurance system
- New distribution of the responsibilities affecting airworthiness or environmental protection

A1.3 Changes of the principles of procedures related to:

- The type certification
- The classification of changes and repairs as “major” or “ minor”
- The treatment of major changes and major repairs
- The approval of the design of minor changes and minor repairs
- The issue of information and instructions under the DOA privilege
- The approval of documentary changes to the Rotorcraft Flight Manual
- The approval of the design of major repairs
- Continued airworthiness
- The configuration control, when airworthiness or environmental protection is affected
- The acceptability of design tasks undertaken by partners or subcontractors
- The approval of the Flight Conditions and issue of the Permit to Fly

A1.4 Resources

- Substantial reduction of the number and of the experience of staff

A2) NON SIGNIFICANT CHANGES

Those not falling under the definition of A1.

7.3 Transferability of approval

The Design Organization Approval is not transferable.
An exception may be considered when the transfer results from a change in ownership in which case it represents anyway a significant change.

8 THE AGUSTA DESIGN ORGANIZATION HANDBOOK

The Agusta DOA Handbook, document n° C750-02 and all the referenced procedures are binding instruction for all personnel charged with the development and type investigation of those products for which Agusta is TC applicant/holder.
For those product lines for which Agusta is partner but not TC applicant/holder, the specific program related procedures are binding; where those program related procedures are not detailed enough or relate to company procedures, those of this DOA Handbook will be applied.

The Office of Airworthiness is responsible of the Handbook:

- preparation and updating;
- distribution outside the Company;
- notice of availability within the Company.

Office of Airworthiness contacts:
Tel.: +39 0331-229257 – Fax: +39 0331-711763
Email : Gianluigi.Gino@agustawestland.com

8.1 Scope of the Handbook

This Handbook is issued in order to:

- describe the organization established by AGUSTA to be approved as a Design Organization;
- define allocation of responsibilities within the Organization;
- provide the top level procedures related to the Design Assurance System.

8.2 Contents of the Handbook

The Handbook is organized in five Parts.

- DECLARATION AND TABLE OF CONTENTS
- PART I GENERAL
- PART II DESIGN ORGANIZATION
- PART III D.A.S. PROCEDURES
- ADDENDUMS

PART I of the Handbook is issued by the Head of the Design Organization and approved by the Chief Executive. It provides:

- information on Agusta as a whole, and on the Design Organization;
- the applicable regulations and legislation;
- the policy for DOA;
- fundamental concepts on the DOA / DAS;
- procedures for DOA application, validity and management of changes to the Design Assurance System;
- the overall lay out of the Handbook;
- the DO Terms of Approval;
- a short helicopters description.

PART II of the Handbook is issued by the Head of the Design Organization and approved by the Chief Executive. It provides:

- description of the Design Organization, its Departments and Offices and their functions;
- hierarchical and functional links between the various organizational units;
- definition of responsibilities assigned to the Management Staff and Certifying Personnel;
- a description of the human resources;
- training management and programs.

PART III of the Handbook is the collection of the top level D.A.S. procedures and provides a list of the other procedures referenced in the Handbook.
Referenced procedures provide the necessary details for the interested persons, in conformity with the principles laid down in the Handbook.
The DAS procedures are issued individually by the Head of Design Organization.

ADDENDUMS are produced to deal specific programs/ situations as needed.

8.3 Handbook editing and updating

The Handbook is edited in English language by means of a word processing system; it is organized in sections in order to simplify their management.
Each page of each section provides information on the single and total number of pages of the section and on the issue status.

Each section of the Handbook is completely reissued at each revision; no individual page revision and no list of applicable pages are provided.
The log of revisions provides information on the revision content.
The changed text is identified by a vertical bar on the right side of the page.

8.4 Handbook distribution

The Handbook is made available in electronic form to all the Agusta personnel through the PANAGON system (ref. AWEOS011).

Copies of the Handbook are provided to the DOA Team on the basis of specific agreements with the interested parties.

Notice of the DOA Handbook availability on PANAGON is circulated by the Airworthiness Office to all the responsible persons quoted in C750-02-002.

The addresses are responsible to use the up to date issue of the Handbook.

The Management Staff and the Heads of Offices and Areas shall make sure that the personnel under their responsibility is aware of the Handbook, of its content and do behave in conformity with it.

9 TERMS OF APPROVAL

The Design Organization Approval has been originally granted with the Certificate N. ENAC.JA.003 issued to AGUSTA S.p.A. on January the 26th, 2001 and subsequent updating.
The Design Organization Approval is now granted by EASA.
The valid approval certificate and related specification are reproduced in Appendix 1.
The terms of approval (scope of work, categories and list of products, privileges) are quoted in the approval certificate and related specification.
The approval of the capability of the Agusta Organization to design, develop and make the final assembly of the BA 609 experimental aircraft is in progress.

9.1 Change of Term of Approval

Each change to terms of approval shall be approved by the Agency.
The application for the change to Terms of Approval is submitted in writing to the Agency through EASA Form 82 signed by the Chief Executive or authorized representative (HDO), together with the proposed changes to the Handbook and/or the related procedures. (EASA Form 82 is available in the EASA website).

APPENDIX 1

APPROVAL CERTIFICATE

European Aviation Safety Agency

APPROVAL CERTIFICATE

EASA.21J.005

Pursuant to Regulations (EC) 1592/2002 and (EC) 1702/2003 and subject to the conditions specified below, the Agency hereby certifies

AGUSTA S.p.A.

Via G. Agusta 520 – Cascina Costa di Samarate (VA)
Italy

as a

DESIGN ORGANISATION

approved according to Part 21, Section A, Subpart J

CONDITIONS

1. The approval is limited to that specified in the enclosed Terms of Approval.
2. This approval requires compliance with the procedures specified in the Design Organisation Handbook, ref. C750-02 in the latest revision, and
3. This approval is valid whilst the approved Design Organisation remains in compliance with Part 21, Section A, Subpart J.
4. Subject to compliance with the foregoing conditions, this approval shall remain valid until surrendered or revoked.

For the European Aviation Safety Agency,

Date of issue: 26/01/2004

Patrick GOUDOU
Executive Director

European Aviation Safety Agency

Terms of Approval

Design Organisation Approval Certificate
EASA.21J.005

1. Scope of approval

This Design Organisation Approval has been granted for:

- designing rotorcraft and changes and repairs thereto in accordance with the applicable type-certification basis and environmental protection requirements:
- showing and verifying the compliance with the applicable type-certification basis and environmental protection requirements, and
- demonstrating to the Agency this compliance.

2. Categories of products

Large and small rotorcraft.

3. List of products

Types for which Agusta is type-certificate holder:

Large helicopters:
AB 204 series
AB 205A1
AB 212
AS 61N; AS 61N1
AB 412 series
AB 139 (from S/N 31001 up to 31054)
AW 139 (from S/N 31055 onwards)
EH101-300; EH101-500; EH101-510

Small helicopters:
A 109 series
A 119; AW119 MKII
AB 206 A; AB 206B
AB 47 series

4. Privileges

(a) The holder of this design organisation approval shall be entitled to perform design activities under Part 21 and within its scope of approval.

(b) Subject to 21A.257(b), the Agency shall accept without further verification compliance documents submitted by the holder of this design organisation approval for the purpose of obtaining:

1. the approval of flight conditions required for a permit to fly; or
2. a type certificate or approval of a major change to a type design; or
3. a major repair design approval.

(c) The holder of this design organisation approval shall be entitled, within its terms of approval and under the relevant procedures of the design assurance system:

1. to classify changes to type design and repairs as "major" or "minor".
2. to approve minor changes to type design and minor repairs.
3. to issue information or instructions containing the following statement: "The technical content of this document is approved under the authority of DOA ref. EASA.21J.005".
4. to approve documentary changes to the aircraft flight manual and supplements, and issue such changes containing the following statement: "Revision nr. xx to

AFM (or supplement) ref. yyy is approved under the authority of DOA ref. EASA.21J.005."

5. to approve the design of major repairs to products for which it holds the type-certificate.
6. to approve the conditions under which a permit to fly can be issued in accordance with 21A.710(a)(2),
   (i) except for initial flights of:
   - a new type of aircraft, or
   - an aircraft modified by a change that is or would be classified as a significant major change, or
   - an aircraft whose flight and/or piloting characteristics may have been significantly modified.

   (ii) except for permits to fly to be issued for the purpose of 21A.701(a)(15).
7. to issue a permit to fly in accordance with 21A.711(b) for an aircraft it has designed or modified, and when the design organisation itself is controlling under its DOA the configuration of the aircraft and is attesting conformity with the design conditions approved for the flight.

5. Limitations

[See in 1, above]
None.

Date of issue: 04 April 2011

Roger SIMON
Design Organisation Manager

APPENDIX 2

HELICOPTERS DESCRIPTION

LARGE HELICOPTERS

AB204 series

Single engine rotorcraft, two (2) metallic M.R. blades, twin (2) blades tail rotors, skid landing gear; one (1) pilot and nine / ten (9/10) passengers capacity.

AB205A1

Single engine rotorcraft, two (2) metallic M.R. blades, twin (2) blades tail rotors, skid landing gear; one (1) pilot and fourteen (14) passengers capacity.

AB212

Twin engine rotorcraft, two (2) metallic M.R. blades, twin (2) blades tail rotors, skid landing gear; one (1) pilot and fourteen (14) passengers capacity.

AS61N, AS61N1

Twin engine rotorcraft, five (5) metallic M.R. blades, full articulated main, rotor twin (2) blades tail rotors, tricycle retractable landing gear; two (2) pilots and thirty-nine (39) passengers capacity.
The AS61N1 differ from AS61N for power increasing and cabin configuration, twenty-two / twenty-four (22/24) passengers capacity.

AB412 series

Twin engine rotorcraft, four (4) composite M.R. blades, semi rigid main rotor, twin (2) blades tail rotors, skid landing gear; one (1) pilot and fourteen (14) passengers capacity.

AB139, AW139

AW139 and AB139 are two names for the same product. They identify two batches of aircraft manufactured in conformity with a unique Type Certificate Data Sheet. Refer to Note 2 for applicable Serial Numbers.
The AW139 is a twin-engine transport helicopter having a conventional configuration with a composite five (5) blades fully articulated main rotor, a 4-blades tail rotor and a tricycle retractable wheel landing gear, one (1) pilot and fifteen (15) passengers capacity.

EH101-300

The EH101 is a three-engine transport Helicopter having a conventional configuration with a 5-blades fully articulated main rotor, a 4-blades tail rotor and a tricycle retractable wheel landing gear, two (2) pilots and thirty (30) passengers capacity.

EH101-500

The EH101 is a three-engine transport Helicopter having a conventional configuration with a 5-blades fully articulated main rotor, a 4-blades tail rotor and a tricycle retractable wheel landing gear, two (2) pilots and thirty (30) passengers capacity.

EH101-510

The EH101-510 as a derivative model of EH101-500, is a three-engine transport Helicopter having a conventional configuration with a 5-blades fully articulated main rotor, a 4-blades tail rotor and a tricycle retractable wheel landing gear, two (2) pilots and thirty (30) passengers capacity.

SMALL HELICOPTERS

A109

Light twin-engine aircraft, four (4) metallic blades, articulated main rotor, twin (2) blades teetering tail rotor, tricycle retractable landing gear, one (1) pilot and seven (7) passengers capacity.

A109A

Light twin-engine aircraft, four (4) metallic blades, articulated main rotor, twin (2) blades teetering tail rotor, tricycle retractable landing gear, one (1) pilot and seven (7) passengers capacity. The A109A differs from A109 model for the installation of Allison 250-C20B Turbo Engines

A109C

Light twin-engine aircraft, four (4) composite M.R. blades, articulated main rotor, twin (2) blades teetering tail rotor, tricycle retractable landing gear, one (1) pilot and seven (7) passengers capacity. The A109C differs from A109AII model for the installation of composite M.R. blades and increased Maximum AUW.

A109K2

Light twin-engine aircraft, four (4) composite M.R. blades, articulated main rotor, twin (2) blades teetering tail rotor, tricycle fixed landing gear; one (1) pilot and seven (7) passengers in normal category, one (1) pilot and six (6) passengers in restricted category. The A109K2 differs from A109C model for the installation of Turbomeca Arriel 1K1 turbo engines.

A109E

Normal Category and “Equivalent Cat A” operations.

Light twin-engine aircraft, four (4) composite MR blades, articulated (with elastomeric bearings) main rotor, twin (2) blades teetering tail rotor, tricycle retractable landing gear or skid landing gear for helicopters equipped with kit p/n 109-0812-57-101, one (1) pilot and seven (7) passengers capacity. The A109E differs from A109K2 model for the installation of Pratt & Whitney Canada PW206C or Turbomeca Arrius 2K1 turbo engines, controlled by FADEC; and for the new cockpit with Integrated Display System (IDS).

A119

Single engine aircraft, four (4) composite MR blades, articulated (with elastomeric bearings) main rotor, twin (2) blades teetering tail rotor, skid landing gear; one (1) pilot and seven (7) passengers capacity.

The A119 differs from A109E model for the installation of a single Pratt & Whitney Canada PT6B-37A turbo engine, controlled by Electronic Engine Control (EEC).

A109LUH

Normal Category and “Equivalent Cat A” operations.

Light twin-engine helicopter, four (4) blades articulated main rotor, twin (2) blades teetering tail rotor, tricycle retractable landing gears, two pilots and six passengers capacity. The A109LUH differs from A109E model for the installation of Turbomeca Arrius 2K2 turbo engines, controlled through FADEC, for the new cockpit, for the new avionic equipment configuration and 4-axis autopilot, fuel tanks and fuel quantity gauging system, main rotor group, engine and transmission oil cooling system, airframe modifications to improve cockpit accessibility.

A109S

Normal Category and “Category A” operations.
Light twin-engine helicopter, four (4) blades articulated main rotor, twin (2) blades teetering tail rotor, tricycle retractable landing gears, one / two pilots and six / seven passengers capacity.
The A109S differs from A109E model for the installation of Pratt & Whitney Canada PW207C turbo engines, controlled through FADEC, passengers and pilots crash resistant seats and fuel tanks and fuel quantity gauging system crash resistant, main rotor group, engine and transmission oil cooling system, and airframe modifications to improve cockpit accessibility.

AW119MKII

Single engine rotorcraft controlled by Electronic Engine Control (EEC), four (4) composite MR blades, articulated (with elastomeric bearings) main rotor, twin (2) composite blade teetering tail rotor, skid landing gear, one (1) pilot and seven (7) passengers capacity.

AW109SP

Light twin-engine helicopter, four (4) blades articulated main rotor, twin (2) blades teetering tail rotor, tricycle retractable landing gears, one/two pilots and six/seven passengers capacity.
The AW109SP differs from A109S model for a new hybrid Metal-Composite fuselage structure, a four channel digital autopilot and a new cockpit layout with 4 displays (EFIS).

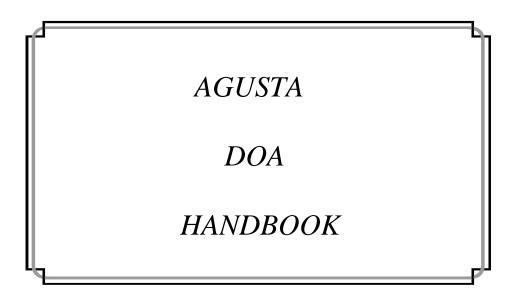
A109N

Light twin-engine helicopter, four (4) blades articulated main rotor, twin (2) blades teetering tail rotor, tricycle retractable landing gears, one/two pilots and six/seven passengers capacity.
The A109N differs from A109E model for the installation of Pratt & Whitney Canada PW207C turbo engines, controlled through FADEC, pilots crash resistant seats, main rotor group, engine and transmission oil cooling system, digital four-axis dual-duplex Automatic Flight Control System and full digital flight instruments and radio management system.

AB206A, AB206B

Single engine rotorcraft, two (2) metallic M.R. blades, twin (2) blades tail rotors, skid landing gear; one (1) pilot and four (4) passengers capacity.
The AB206B differ from AB206A the installation of Allison 250-C20B Turbo Engines.

AB47 series

Single engine rotorcraft, two (2) M.R. blades, twin (2) blades tail rotors, skid landing gear; one (1) pilot and two (2) passengers capacity.

PART II

THE DESIGN ASSURANCE SYSTEM

DOC. N° C750-02-002

ISSUE R **DATE: April 8, 2011**

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ISSUE	DESCRIPTION	
A	First Issue	Prepared P. G. Colombo Date 01/12/00 Checked P. Alli Date 01/12/00 Approved M. Pellerei Date 04/12/00
B	Complete revision of the text to improve readability and to update the design organization and the appointed persons namely in the areas of Chief Executive, QUA DT, DO System Monitoring, DT sist. Elic., DT sist. Av., Op. Spe, Lab Tecnol e di prova, Unità Decentrata Frosinone, Ingegneria Logistica, non conformities	Prepared P. G. Colombo Date 21/12/01 Checked P. Alli Date 21/12/01 Approved A. Gustapane Date 21/12/01
C	Updating on the appointed • Chief Executive • A109/A119 Project Manager • A109 series CPEs. • AE and CVE Introduction of the concepts of approval of repairs, company approval of Technical Bulletins, Company approval of manuals. Updating of the text to improve readability	Prepared P. G. Colombo Date 20/01/03 Checked P. Alli Date 20/01/03 Approved G. Orsi Date 20/01/03
D	Updating on the appointment/ organization of • CPE AB139 • License e service engineering • DAS monitoring • Area Avionica • Operazioni sperimentali e prove di volo • Some CVEs • Some AEs Better definition of tasks and responsibilities for planning the TIP and training the human resources Clarification on the DO relationships Updating on the available human resources Updating of the text to improve readability	Prepared P. G. Colombo Date 20/01/04 Checked P. Alli Date 20/01/04 Approved G. Orsi Date 20/01/04

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E	Updating on the appointment/organization of • EH101 CPE • Some AEs • Some CVEs • DO relationship with other functions (AII; experimental test pilots) Introduction of reference to 100-50-178 Better definition and management of the training Updatings of the text to improve readibility	Prepared P. G. Colombo Date 06/09/04 Checked P. Alli Date 07/09/04 Approved G. Orsi Date 07/09/04
F	Updating the design organization and the appointed persons namely in the areas of: • Chief Executive • HDO • CPE NH-90 • Engineering Customer Support e Licenze • Engineering Customer Support • Riparazioni • System Monitoring / Qualità Vice Direzione Tecnica • Area Avionica • Progettazione Base Elicottero • Metodologie e Supporti • Some CVEs • Non conformities Taking into account “Disposizioni Organizzative” up to and including n° 54/04.	Prepared P. G. Colombo Date 01/02/05 Checked G. Monti Date 01/02/05 Approved B. Spagnolini Date 01/02/05
G	Updatings in para 3.6 of the appointed head of System Monitoring; some CVEs; some persons dealing with non conformities. Consistent updatings in the Appendix 1 Takes into account “Disposizioni Organizzative” up to and including n. 09/05	Prepared P. G. Colombo Date 21/06/05 Checked G. Monti Date 21/06/05 Approved B. Spagnolini Date 21/06/05
H	Updating of the appointed Head of the Airworthiness Office, the A119 CPE and AB139 and correction of typographical errors. Updating of appointed / organization of System Monitoring. Updating of the definition of the management staff. Change of the reference from 100-50-166 to IQS-015. Introduction of reference to procedures applicable to laboratories for instrument calibration. Description of the training plan. Extraction of the list of personnel appointed for review e classification of production non conformities and introduction of reference of the relevant procedure.	Prepared G. Gino Date 20/01/06 Checked G. Monti Date 20/01/06 Approved B. Spagnolini Date 20/01/06

ISSUE	DESCRIPTION	
I	Updating the design organization and the appointed persons taking into account “Disposizioni Organizzative” n° 11/06, 12/06, 13/06 e 16/06; in particular the CPE of Agusta 119 and the CVE “Flight and ground laod”. Change of the reference from 100-50-115 to 100-50-194. Introduction of para 4.7 “Agusta DO and other PO”.	Prepared G. Gino Date 28/07/06 Checked G. Monti Date 28/07/06 Approved B. Spagnolini Date 31/07/06
J	AW139 new trademark. Updating of the referenced procedures. Introduction of reference to AQ 13-15 and elimination of reference to procedure AQ 13-09. Updating the design organization and the appointed persons further to AW Company Notices n° 01/07, 04/07, 07/07, 08/07 e 09/07. Updating on the appointed AEs and CVEs list.	Prepared G. Gino Date 01/06/07 Checked G. Monti Date 07/06/07 Approved B. Spagnolini Date 11/06/07
K	Updating on the list of the appointed CVEs. Updating of appointed person of Technologies Laboratory area. Updating from new AW119MKII. Updating of the referenced procedures. Updating of task and responsibilities of DO functions from introduction of privileges about the approval of Flight Conditions and issue of Permit to Flight. Introducing of the list of the appointed CS-DO. Introducing of the list of the agreements established between DO Agusta and other PO (Appendix 5)	Prepared G. Gino Date 20/11/07 Checked G. Monti Date 20/11/07 Approved B. Spagnolini Date 20/11/07
L	Updating the reference/name of quoted procedures. Updating on the appointed CPE Licences, CPE A109 Military versions and A109LUH, CVEs and AE list. Updating of task and responsibilities of the AE. Clarifying of task and responsibilities about the production non conformity decision. Updating the design organization and the appointed persons further to AW Company Notices n° 34/07, 03/08, 05/08, 07/08, 10/08, 14/08, 16/08, 17/08, 18/08, 24/08, 26/08, Department Notice n° 05/08, C.I. n° CTO/2008/026, /027, /019, /017, and /016 by updating of tasks and responsibilities and appointed personnel of the following depts: • Unità decentrata Frosinone e Anagni, • Engineering Human Resources Partners • Engineering Licenses & Support • Product Support Engineering • Airframe & Repair Design • Airframe Systems D&D • Rotor Systems D&D • Structures D&D • Transmission Systems D&D • Experimental Operation Quality dep. • Engineering Procedures and Data Management	Prepared G. Gino Date 30/06/08 Checked G.Monti Date 09/06/08 Approved B. Spagnolini Date 10/06/08

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<tr><td>M</td><td>Updating the reference/name of quoted procedures.
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<tr><td>N</td><td><u>Significant changes</u>
Appointment of a new HDO and changes to the structures of the Engineering Organization (as per Company Organisational Notice CON 27/09 issued and effective on 31/07/09).</td><td>Prepared G. Gino Date 29/07/09
Checked G. Monti Date 30/07/09
Approved B. Spagnolini Date 31/07/09</td></tr>
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P	Significant changes. Appointment of a new CPEs in charge for Type A109 Type according to CTO/2010/004 dated 8/2/2010 Not significant changes. Updating according to AW Company Organizational Notice n° 44/09, 45/09, 46/09, 47/09, 48/09, 01/10, 03/10 of tasks and responsibilities and appointed personnel of the following depts: • Helicopter System Design • Airframe Systems D&D • Electrical & Avionic Systems D&D • Structures D&D • Rotor Systems D&D • Transmissions Systems D&D • Experimental Operations & Flight Test • Process and planning Appointment of a new AE (ref. CIV.AIRW/10/007)	Prepared G. Gino Date 08/02/10 Checked F. Nannoni Date 08/02/10 Approved B. Spagnolini Date 08/02/10
Q	Not significant changes. Updating the name of referenced procedures. Updating according to AW Company Organizational Notice n° CON 05/10, 08/10, 09/10, 19/10, 20/10, 23/10, 28/10, DON-ENG 01/11 of tasks and responsibilities and appointed personnel of the following depts: • Product Support Engineering • Engineering Licenses • Processes & Planning • Experimental Operations & Flight Test • Electrical & Avionic Systems D&D Appointment of a new AE Appointment of a new CVE Removing of the Appendix 5, this information are quoted in the document C750-02-003.6 *(Ref. Findings EASA F09-007and -009)*	Prepared G. Gino Date 28/02/11 Checked F. Nannoni Date 28/02/11 Approved B. Spagnolini Date 28/02/11
R	Significant Changes: extension of privileges for Flight Conditions & Permit to Fly • Introducing of the responsibilities for the Independent Technical Verifier functions	Prepared G. Gino Date 28/3/11 Checked F. Nannoni Date 5/4/11 Approved B. Spagnolini Date 8/4/011

REFERENCES

EC Regulation n. 1702/2003 "Certification of Aircraft and related products, parts and appliances, and of design and production organizations

C750-02-003.1	"Type Investigation Procedure"
C750-02-003.2A	"Procedure for Classification and Approval of Changes to Type Design"
C750-02-003.2B	"Procedure for Classification and Approval of Design Major Repair"
C750-02-003.2C	"Procedure for Approval of Flight Conditions and Issue of a Permit to Fly"
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C750-02-003.6	"Coordination between Design and Production, list of the arrangements"
C750-02-003.7	"Procedure for Qualification of Subcontractors"
C750-02-003.8	"System Monitoring Procedure"
C750-02-003.9	"DAS Procedures"
C740-10	"Organismo del System Monitoring della Design Organisation"
C740-15	"Arrangement DO-PO"
100-50-140	"Bollettini tecnici preparazione ed approvazione"
100-50-157	"Ispezioni e prove nei processi di certificazione civile" "Qualification and quality assurance requirements for suppliers of equipment for Agusta helicopter"
100-50-173	"Requisiti professionali del Personale addetto alla Certificazione"
100-50-175	"CVE ed AE – Compiti, responsabilità, modalità operative"
100-50-176	"Conformità alle norme di aeronavigabilità e di programma di omologazione modalità di preparazione e gestione dei documenti relativi"
100-50-178	"Gestione software tecnico-gestionali della VGDT"
100-50-180	"Procedura per la gestione degli elicotteri sperimentali"
100-50-194	"Personale della Design Organization autorizzato alla delibera delle non conformità di produzione"
100-50-197	"Flight Conditions and Permit to Fly"
100-50-198	"Design Change Authorization (AMD)"
100-54-005	"Gestione e taratura degli strumenti di misura"
LI900-P00-01	"Modalità operative del laboratorio ATIM"
LI900-C52-01	"Normativa di controllo della strumentazione del Laboratorio ATIM in corrispondenza alla norma AQ 11-01"
LS900-801-01-01	"Sistema Qualità nel Laboratorio Prove Strutturale"

LTS 2228	“Sistema Qualità nel laboratorio Tecnologie Sperimentali
PRO.FSE.052.02	“Procedura per la preparazione, la validazione e l’approvazione delle pubblicazioni tecniche”
PRO.FSE.026.96	“Procedura operativa per la conservazione e la distribuzione delle pubblicazioni tecniche”
PRO.FSE.019.96	”Repairs design, management and approval”
PRF.SCC.015.00	“Modalità operative Laboratorio Trasmissioni”
PRF.SCC.018.00	“Definizione delle discipline, delle specializzazioni e delle deleghe di firma per l’area PTCM della divisione trasmissioni”
AQ 06-01	“Valutazione sistemi qualità dei Fornitori”
AQ 11-01	“Gestione delle apparecchiature per misurazione”
AQ 13-01	“Gestione delle non conformità e delle azioni correttive”
AQ 13-05	“Occurrence reporting and management process”
AQ 13-11	“Process for the reporting and management of accidents and serious incidents”
AQ 13-15	“Gestione dei Materiali da Rivedere (MDR)”
AQ 17-01	“Audit interni e gestione delle non conformità sul Sistema di Gestione per la Qualità”
AQ 18-08	“Qualificazione e mantenimento della competenza degli auditor”
AQ 09-06	“Production Permit – Programma EH101”
AQ 09-11	“Gestione delle deviazioni (Production Permit)”
IQ S015	“Qualification and Quality Assurance Requirements for Suppliers of Equipment during design and Development Phases”

DEFINITIONS

Applicant
In this Handbook means a "Person" applying for a Design Organization Approval (DOA) under the applicable regulation.

Comply, Compliance
Are used in connection with meeting a rule, regulation or requirement.

Conform, Conformity
Are used in connection with showing or finding a product, part or appliances is in accordance with the relevant design data.

Design Assurance System
Is the organizational structure, responsibilities, procedures and resources to ensure the proper functioning of the Design Organization.

Design Organization
Is the portion of the Agusta Company in charge to design, develop, and get Certifications from the AA of products quoted in the DOA terms of approval.

Person
Is a legal entity, which is subject to the jurisdiction of an EU country; it can include an Organization or Company.

Product
Means an aircraft, aircraft engine or propeller.

ACRONYMS

AA	Airworthiness Authority
AE	Airworthiness Engineer
AERON	Office of Airworthiness
AII	Accidents / Incidents Investigations
AMD	Autorizzazione Modifica Disegno / Drawing Change Authorization
AW	AgustaWestland
CCL	Compliance Check List
CE	Chief Engineer
CEO	Chief Executive Officer
COO	Chief Operating Officer
CP	Chief Project
CPE	Chief Project Engineer
CS-DO	Certifying Staff of the Design Organization
CTO	Chief Technical Officer
CVE	Compliance Verification Engineer
DAS	Design Assurance System
DO	Design Organization
ED	Engineering Director
EU/ UE	European Union/ Unione Europea
FC	Flight Conditions
HDO	Head of Design Organization
ITV	Independent Technical Verifier
PO	Production Organization
PtF	Permit to Fly
SE	Sustaining Engineer
TcoE	Transmission Mechanical Parts Centre of Excellence
TIP	Type Investigation Program
TS	Transmission Systems
TTL	Technical Team Leader

1 GENERAL

1.1 Basic Principles

In accordance with EU regulation Part 21, Subpart J, a Design Assurance System is established within the Agusta Design Organisation (DO) with the intent to set the basis to enable the Airworthiness Authorities (AA) to accept statements, from the Engineering Director / Head of Design Organization, that the applicable airworthiness regulations have been complied with. The fundamentals of such a system are:

- the organizational structure
- the allocation of responsibilities
- the applicable procedures
- the human resources

The organization is described in Section 2 of this document.
The responsibilities are defined in Section 3 of this document.
The interfaces between design organization and other Agusta functions are listed in section 4 of this document.
The resources are described in Section 5 while section 6 deals with the training policy for personnel involved in the DOA activities.

The procedures are collected in the Part III of the DOA Handbook.

1.2 The design process

The complete design process can be divided in three main phases:

- Specification
- Type investigation
- Type certification

Specification consists of the whole of:

- product specification, plus
- airworthiness requirements

Type investigation means all the activity carried out for:

- showings of compliance
- verification of compliance
- declaration of compliance

Type certification is the outcome of the overall process, as a result of the demonstration, given to the AA, of the compliance with the applicable requirements.

1.3 Design Assurance System

A Design Assurance System is set up within the Agusta DO for the control and supervision of the design and the design changes of products, parts and appliances. This DAS is such as to enable the organization:

- to design in compliance with the applicable requirements;
- to show and verify compliance with these requirements;
- to give demonstrations to the AA of this compliance;
- and in general to act in conformity with appropriate procedures.

The Agusta DAS is based on the following functions:

- Engineering Director / HDO;
- Chief Engineer;
- Chief Project Engineers (CPE);
- Engineering;
- Office of Airworthiness;
- Compliance Verification Engineers (CVE);
- System Monitoring;
- Certifying Staff of the Design Organization (CS-DO);
- Independent Technical Verifier (ITV).

The DAS functions established by Agusta are shown in Appendix 1.

2 THE ORGANIZATION

2.1 General

The Chief Executive of the Agusta DO is the "Amministratore Delegato" of Agusta S.p.A. (Chief Executive Officer). He represents the TC and DOA holder.

The AW Chief Technical Officer (CTO) is responsible for the overall AW Engineering objectives and results, ensuring the log-term sustainability of the AW Engineering capability and the Engineering efficiency and effectiveness.

The AW Engineering Director (ED) is responsible for conceiving, developing, certifying and supporting all the AW products, aircraft system and sub-systems, pursuing technological excellences and innovation in order to make the AW products fully respondent to the market and the Customer requirements.

The ED acts as Head of the Design Organization according to Part 21 Subpart J, reporting in this role to the Chief Executive.

The ED has the direct and in few cases the functional responsibility for the departments of the AW Engineering. For the departments functionally linked (including Processes & Planning, Structural Test and Technologies Laboratory, Experimental Operation and Flight Test, System Monitoring & Quality Assurance), the ED still carries the ultimate responsibility for compliance of the organization with Part 21 Subpart J. (ref. GM No.1 to 21A.245 para. 4.1).

2.2 The structure of the Design Organization.

In this paragraph only the AW Engineering Organization departments that are under DOA rules are described. The different levels of the bullet points structure are identified with:

- **for the first level reporting to the ED/HDO;**
- ♦ for the second level reporting to the first level ;
- ❖ for the third level reporting to the second level.

- **CHIEF ENGINEER (CE)**

  The role of the CE is to assist and support the ED/HDO in all the engineering activities listed in the paragraph 3.3.1.2.. See paragraph 3.3.2 for individual responsibilities.

  ♦ CHIEF PROJECT ENGINEER (CPE)
  To each product an appointed CPE is assigned.
  The CPE acts as deputy of the ED/HDO for the assigned product.
  This function has the overall responsibility of design, development, qualification/ certification, for the aircraft and its modification, of determination on production non conformities and failures, malfunctions, defects for the product line of which is in charge. See paragraph 3.3.3 for individual responsibilities.

- AIRWORTHINESS
  This function is tasked with the management of the airworthiness issues both within the DO and towards the Authorities. The Airworthiness Office operates through the activities carried out by the Airworthiness Engineers and of the Compliance Verification Engineers (CVE).
  These individuals may be part of the office or may be functionally linked to it when dealing with matters of airworthiness. See also document n. 100-50-175.

- PROJECT MANAGER Type A109 – all variants/models
  This function is tasked with fostering the development of competitive products and providing the proper level of standardization across the different variants/models of the Type A109. It provides centralized services to the appointed CPEs as regard the control of the configuration, development of aircraft customizations, continued airworthiness. The CPEs of the different variants/models are fully responsible for the matters of airworthiness including the control of the configuration and management of failures, malfunction and defects; they report to the ED/HDO for such matters.

The following AW engineering main departments are hereby described:.

- **HELICOPTER SYSTEM DESIGN (HSD)**
  - During product definition and basic product design phases, HSD elaborates configuration alternatives in accordance with Strategy and Technology Innovation guidelines, Business and Operations inputs; develops concept and evaluates feasibility.
  - During Product Design and Development phases HSD having the following responsibilities assigned:
    - New helicopter design, working with sub-systems Technology Departments (Depts).
    - Major updates of existing products working with CPE and sub-systems Technology Depts.
    - Integration of all technical (including sub-system design) and development activities up to the certification/qualification completion.
    - Concurrent Engineering with Manufacturing Purchasing and In-Service Engineering functions.
    - New product and major product update safety and airworthiness.
    - DMU and configuration control for new product (for major updates of existing product through CPEs).
    - Technological Innovation.

  A number of specialist functions report to “Helicopter System Design” of which those relevant for airworthiness are:

  - VEHICLE TECHNOLOGIES & AEROMECHANICS.

    The following functions report to “Vehicle Technologies & Aeromechanics ”

    - STRUCTURAL DYNAMICS
    - AIRFRAME LOADS
    - ROTOR DYNAMICS AND LOADS
    - FLIGHT MECHANICS
    - AERODYNAMICS
      - ROTOR AERODYNAMICS
      - FUSELAGE AERODYNAMICS
      - AERODYNAMICS LABORATORY and WIND TUNNELS
      - ACOUSTICS

The function "Vehicle Technologies & Aeromechanics" includes laboratories, which are tasked with testing the system of competence. The procedure AQ 11-01 is applied. See App. A4. To state or show conformity of test specimen, test instrument and fixtures, the procedure 100-50-157 applies.

- WEIGHT MANAGEMENT

This function is tasked with:

- weight control during early design phase;
- preparation of target weights in conjunction with design specialists and subsequent monitoring of achievements including "in-house" and "procured" items;
- weight and balance analysis of completed designs/drawings, prior to issue, verifying compliance with overall Air vehicle requirements, including the management of a computerized mass proprieties database system that provide mass proprieties data. The system provides these data for weight status reporting, loads analysis and for FEM;
- preparation of the relevant certification/qualification documentation;
- regular reporting of weight and balance aspects for costumer and in-house purpose;
- where applicable, Operations and Quality through Weight Management manage component/aircraft weighing including preparation and approval of customer acceptance weight documentation;
- suggest technologies and methods to continuously monitor and improve the sub-system/components weight with the aim to reach the lightest possible vehicle configuration.

- DIAGNOSTIC SYSTEMS

- SYSTEMS RELIABILITY & SAFETY

This function is tasked with.

- understanding and harmonization of the H/C level Reliability, Maintainability, Availability, Testability and Safety Requirements. This task will be the results of a work performed in cooperation with the HSD "Mission & Requirements Analysis" group, the Avionic "Preliminary Design & Innovation Common Architecture" group and the CPE offices;
- support, for the matter of competence, the certification or qualification activities of all the new military or civil Projects and of all the modifications applied to the existing Products;
- starting from the requirements allocated at H/C level cooperate with the Design & Development Organisations (Technical Areas), since the beginning of the H/C design development, allocate RAMTS requirements for each system/equipment/installation and define all the activities required to demonstrate that the allocated objectives are met;
- introducing the Design & Development Organisations (Technical Areas) to the Reliability, Maintainability and Safety Analysis techniques to be used during the Design and Development of new or modified products;
- introducing the Design & Development Organisations (Technical Areas) to the MSG-3 Analysis as methodology to be used to select tasks/preventive maintenance actions which will ensure retention of the designed safety and reliability of systems under while providing economic benefit; as a long term task the D&D Organisations (Technical Areas), under the supervision of the SRS specialists, will take the full responsibility of performing the system level SRS tasks, exporting, across the entire the Company, the model actually utilized , for Safety analyses, in AW UK Organization.
- continuously promote the growth of the know how in the Safety and Maintainability science participating actively to research activities and support the development of new methodology for the fields of responsibility.

This function includes a CIVIL PROGRAM unit. It is tasked with reliability, maintainability and safety assessment of the design; coordination of the Maintenance manual preparation. The above functions have the task to prepare the relevant portion of the CCL and to show compliance with the airworthiness rules of competence.

Design and Development (D&D) organisations (ELECTRICAL AND AVIONICS SYSTEMS, AIRFRAME SYSTEMS, STRUCTURES, ROTOR SYSTEMS, TRANSMISSIONS) are tasked to:

- Contribute to the sub-systems specifications definition under the leadership of:
  - HSD for new helicopters and major updates.
  - CPE for minor updates and customisations.
- Design sub-system to meet specifications.
- Develop, test and qualify sub-system
- Integrate with Production Engineering and Manufacturing.
- Integrate with Vendors and Purchasing functions.
- Integrate with Product Support.
- Provide expertise to support HSD and Chief Engineers.
- Deal with sub-system safety and specific airworthiness aspects.
- Assure Technological Innovation.

In particular:

- **ELECTRICAL AND AVIONICS SYSTEM D&D** is tasked with the design, development and integration of the avionics systems. A number of specialist functions report to "Electrical and Avionics System D&D" of which those relevant for airworthiness are:
  - ♦ INTEGRATION LAB & AVIONIC PRODUCTION dealing with design and development RIG for integration of the avionics software. This function includes laboratories, which are tasked with testing the system of competence and calibrating the instruments of competence. The procedure AQ 11-01 is applied. See Appendix 4.
  - ♦ AVIONICS PLANNING, CONTROL & BUDGETING
  - ♦ PROCESS ENGINEERING dealing with developing the Departmental processes and procedures in coordination with the methodological and Quality functions.
  - ♦ INNOVATION & SIMULATION HUMAN MACHINE INTERFACE
  - ♦ ELECTRICAL ENGINEERING dealing with definition, development, and management of all the electric generation and distribution, electromagnetic environmental effects, wiring and installation. To state or show conformity of test specimen, test instrument and fixtures, the procedure 100-50-157 is applied.
    The following functions reports to "Electrical Engineering":
    - ❖ ELECTRICAL SYSTEMS
    - ❖ ELECTRICAL INSTALLATION DESIGN (ITA)
    - ❖ ELECTRICAL INSTALLATION DESIGN (UK)
    - ❖ ELECTROMAGNETIC ENVIRONMENTAL EFFECTS
  - ♦ AUTOMATIC FLIGHT CONTROL SYSTEM (AFCS) / FLY BY WIRE (FbW). To this function report:
    - ❖ FLY BY WIRE
    - ❖ AUTOMATIC FLIGHT CONTROL SYSTEM LYNX, EH101
    - ❖ AUTOMATIC FLIGHT CONTROL SYSTEM A109, AW139, AW149 and A129

- SOFTWARE ENGINEERING dealing with in house avionics development. To state or show conformity of test specimen, test instrument and fixtures, the procedure 100-50-157 is applied. The following functions reports to "Software Engineering":
  - AIRCRAFT / FLIGHT MANAGEMENT SYSTEM
  - MISSION MANAGEMENT SYSTEMS
  - VEHICLE MANAGEMENT SYSTEM
  - FLIGHT CONTROL SYSTEMS (FCS)
- SYSTEM ENGINEERING dealing with requirements management, system architecture, equipment procurement, Rig and A/C integration and avionics qualification. This function is organized per product lines, each of them managed by a Technical Team Leader (TTL).

The above functions have the task to prepare the relevant portion of the CCL and to show compliance with the airworthiness rules of competence.

- **AIRFRAME SYSTEMS D&D** is made up of a matrix structure based on:
  - System Groups,
  - Technical Team Leaders (TTLs).

System Groups and TTLs are jointly responsible to ensure achievement of the Airframe Systems D&D objectives, the primary of which are the following:

- design, develop and certify / qualify Hydraulic, Fuel, Environmental Control, Marine, General Airframe Systems and Engine Installations;
- contribute to the definition of the aircraft general architecture and lay-out based on the aircraft level requirements;
- contribute to the resolution of in-service malfunctions, the continuous process of improvement of in-service aircraft and the improvement of aircraft maintenance / cost of ownership reduction programmes.

The TTL role is primarily designed to:

- act as the point of reference for the Chief Project Engineers, Production / Aircraft Final Assembly and Customer Support Departments;
- identify priorities related to the programmes within the Airframe Systems Group by liaising with the pertinent Chief Project Engineers and System Chiefs to verify the compatibility of such priorities with the available resources and the ongoing activities;
- manage production / installation and in-service issues.

Systems Groups and TTLs liaise with the System Chief Designers / "Capi Progetto" as required.

The following functions are relevant for airworthiness:

- System Groups: HYDRAULICS SYSTEMS, FUEL SYSTEMS, ENGINE INSTALLATIONS, ENVIRONMENTAL CONTROL SYSTEMS, MARINE / GENERAL AIRFRAME SYSTEMS.
- The TTLs for the product lines.
- Specialist Groups: LABORATORY, STATIC / FATIGUE STRESS.

LABORATORY is tasked with testing the systems and calibrating the instruments of competence. The procedures LI 900-P00-01 e LI 900-C52-01 are applied. See Appendix 4.

To state or show conformity of test specimen, test instrument and fixtures, the procedure n. 100-50-157 is applied.

- **STRUCTURES D&D** is tasked with design, development of structural segments including composites, fix flying controls and landing systems. A number of specialist functions report to "Structures D&D" of which those relevant for airworthiness are:
  - ♦ LANDING GEAR AND FIXED FLIGHT CONTROLS
  - ♦ ANALYSIS AND SIMULATION. This function is tasked to:
    - ▪ hold, maintain and develop processes and standards for the analysis of structural components;
    - ▪ work across the projects providing core capabilities and knowledge – in agreement with the ICT state-of-the-art- allocating staff to the projects and managing staff development.
  - ♦ STRUCTURAL ENGINEERING DESIGN GROUP (Ita). This function is tasked to:
    - ▪ hold, maintain and develop processes and standards for the design and development of structural components;
    - ▪ work across the projects providing core capabilities and knowledge – in agreement with the ICT state-of-the-art and manufacturing tools – allocating staff to the projects and managing staff development.
  - ♦ STRUCTURES RESEARCH AND DEVELOPMENT is tasked with:
    - ▪ coordinate structures and materials research for SD&D;
    - ▪ prepare Structure D&D R&D statements of work and applications for external funding;
    - ▪ identify possible Structure D&D research activities or product improvement opportunities through the use of the latest technology;
    - ▪ provide technical support to the Structures CoE in new technology selection or research.
  - ♦ PRODUCTION LINE STRUCTURAL ENGINEERING
    This function is tasked with design, development, testing of aero-structures (both metallic and composite). To this function report:
    - ❖ Production and Product Support, tasked with provide timely support to the production activities of AW sites of Brindisi and Vergiate (in cooperation with the CSDE Group) and related suppliers by resolving manufacturing non-conformances; and identify the opportunity for basic design changes which improve manufacturing for consideration by the Capo Progetto / Team Leader.
    - ❖ the Chief Project of AW139
    - ❖ the Chief Project of Type A109 all variants/models
    - ❖ Customisation Design and Sustaining Engineer (CDSE), multi-line and multi-discipline, largely focussed on the Structures, it also collets competences and contributions of other Technical Areas and it is integrated with competences of electro-avionic installation.
  - ♦ SPECIAL PROJECTS is tasked with study the structural architecture of new modules or new aircraft in close collaboration with HSD; and act as a trouble-shooter on existing programs as directed by Head of Structures D&D.

- The Chiefs Project of the product lines.

To state or show conformity of test specimen, test instrument and fixtures, the procedure n. 100-50-157 is applied.

- **ROTOR SYSTEMS D&D** is tasked with design, development, testing of rotor systems and related rotating controls. This D&D organisation is based on a matrix structures levering on:
  - Component System Groups tasked with hold, maintain and develop technologies and processes for the design and development of rotor main technologies components working across all projects, as well as core capabilities and knowledge in the rotors components design and development, allocating staff to projects and managing staff development together with the Head of Rotor Systems.
  - Project Teams tasked with carry out all the design and development activities to produce an qualify the rotor components on each A/C project, designing, developing and supporting the specific rotor systems for each project, co-ordinating the tasks and outputs with the relevant CPE.

The following functions are relevant for airworthiness.

- Component System Groups: ROTOR BLADES, HUBS & ROTATING CONTROLS
- The Chiefs Project of the product lines.

The Rotor Systems D&D also consist of:

- ROTOR METHODS tasked with maintain and develop the design methods and how they interface with the methods used HSD and operations and responsible for:
  - developing and maintaining the methods used for design and analisys of rotor components, including in-house and commercial software;
  - assisting designers and analysts with the application of the methods to project work to help exploit improved methods;
  - activating dedicated team to harmonize methods cross-geographically together with HSD.
- ROTORS SUPPORT tasked for supporting the in-service and development issues on rotors across all platforms.

- **ACCIDENTS / INCIDENTS INVESTIGATIONS (AII)**
  AII is responsible to coordinate and integrate the relative activities (meetings management, cooperation in investigations, etc.) for the Continued Airworthiness in accordance with the AQ 13-05 and AQ 13-11.

2.3 Units functionally linked with the DO

The DO also has a functional link with the following parts of the Company as regard their activities in dealing with airworthiness. In that context, these functions must ensure the full compliance with the rules and procedures of Part 21/J, satisfy the DOA Handbook and are subject to the DAS monitoring.
The following units functionally report to the ED/HDO:

Testing organisational structures (EXPERIMENTAL OPERATION AND FLIGHT TEST and STRUCTURAL TEST AND TECHNOLOGIES LABORATORY) are responsible for:

- System / sub-system testing and experimental development contribution to the HSD, CPE and Technology Depts.
- Test plans to meet requirements and certification needs.
- Experimental data acquisition, analysis and documentation.
- Aircraft, systems, components preparation for testing.
- Provision of facilities and services.
- Operation and safety of the Flight Test Centre.
- Operation of Structures and Material Laboratory.
- Technological and methodological innovation.

In particular:

- **EXPERIMENTAL OPERATION AND FLIGHT TEST** is tasked with coordinating the experimental activity in flight. The activity of this function and of the test pilots are integrated in order to optimize the experimental process also through the contribution of the pilots' skill and competence. The following functions report to "Experimental Operation and Flight Test":

  ♦ FLIGHT TESTING METHODOLOGIES

  ♦ FLIGHT TEST INSTRUMENTATION CALIBRATION LABORATORY

  ♦ EXPERIMENTAL OPERATIONS
  This functions is focused with the following tasks (when related ITA-Experimental Operations) and goals (as UK-Experimental Operations are concerned):
    - to improve the responsiveness of experimental operations activities performed in AW sites and external locations, taking into account the increased and more challenging scenario;
    - to manage the Experimental Operations in Italy and support the UK Experimental Operations proposing and implementing DOA operating methods and procedures;
    - to enhance collaboration with Industrial Engineering, Vergiate Final Assembly and Yeovil A/C Centre;

  The following functions report to "Experimental Operation":

    ❖ EXPERIMENTAL OPERATIONS (ITA)
    This function is tasked with the operation of experimental aircraft. This function is located in two main sites: Cameri airfield for the BA609 program and Cascina Costa for the other programs. In particular, this function contributes to the DAS by:

- Granting experimental aircraft airworthiness through configuration changes/updating, repairs and maintenance, as required/approved by the relevant CPE.
- Executing and documenting tests and inspections as specified and planned.
- Ensuring proper working documents on the basis of the applicable design data.
- Verifying and documenting the conformity of test specimens both manufactured by he Agusta Production Organization and by the partners/subcontractors.
- Verifying and documenting the conformity and calibration of tools, rigs and instruments.

This function is also tasked with the final assembly of certain aircraft types of their own full or partial (partnership) design. These activities are carried out following the procedure n. 100-50-180 and 100-50-157.

A number of specialist functions report to "Experimental Operations" of which those relevant for airworthiness are:

– EXPERIMENTAL SHOP
– QUALITY

❖ EXPERIMENTAL OPERATIONS (UK) (DOA rules under implementation)

♦ FLIGHT TEST & DATA ACQUISITION SYSTEMS (UK) dealing with flight test activity, data acquisition and processing.
A number of specialist functions report to "Flight Test & Data Acquisition Systems (UK)" of which those relevant to airworthiness are:

❖ FLIGHT TEST ENGINEERING

❖ FLIGHT TEST DATA ANALYSIS

❖ FLIGHT TEST INSTRUMENTATION

♦ FLIGHT TEST OPERATIONS (ITA)
This function is tasked with flight tests.
In particular this function contribute to the DAS by:

- Carrying out the certification flight tests as planned in the TIP, analyzing the relevant results and making compliance findings for the "flight" subpart of the airworthiness rules.
- Supporting the design and development functions by performing ground and flight testing of the systems of their competence.
- Coordinating, with the relevant Flight Test Chiefs Project, the preparation of the Flight Manual.

A number of specialist functions report to "Flight Test Operations (ITA)" of which those relevant to airworthiness are:

❖ FLIGHT TEST ENGINEERING dealing with ensuring the continued availability of required flight testing technical capabilities and the adoption of flight test procedures complying with the relevant requirements and consistent across all programmes.
This function has the task to prepare the relevant portion of the CCL and to show compliance with the airworthiness rules of competence. To state or show conformity of test specimens, test instruments and fixtures, the procedure n. 100-50-157 is applied.

- DATA ACQUISITION SYSTEMS
- DATA ANALYSIS dealing with ensuring the timely analysis of all test data acquired in flight, including telemetry data, and contribute to the definition of the analysis and presentation requirements.
- FLIGHT TEST INFORMATION METHODOLOGIES
- PERFORMANCE
- For each product lines, a number of Flight Test Chiefs Project report to "Flight Test Operations" that with respect to the programs / products in scope, they ensuring the planning and coordination of all aspects related to flight test activities, including the individual contributions to be provided by the FT Operations Specialists, will ensure the availability of FT data package and Rotorcraft Flight Manuals, and will act as a point of reference for the other Engineering functions and AW Departments.

- **STRUCTURAL TEST AND TECHNOLOGIES LABORATORY** is tasked with:
  - structural tests;
  - strain gauges instrumentation and calibration;
  - materials qualification;
  - definition of process specifications and qualification of special production process;
  - NDT inspection specifications.

  To state or show conformity of test specimen, test instrument and fixtures the procedure 100-50-157 are applied.

  A number of functions report to "Structural Test And Technologies Laboratory" of which those relevant for airworthiness are:

  - STRUCTURAL TEST LABORATORIES (ITA), see the procedures LS 900-801-01-01, LTS 2228
  - STRUCTURAL TEST LABORATORIES (UK) – see Addendum I para 1.1.2
  - TECHNOLOGIES LABORATORY
  - NON DESTRUCTIVE INSPECTION
  - FATIGUE
  - TECHNOLOGIES COORDINATION
  - QUALITY CONTROL

- **PROCESSES & PLANNING** is tasked to plan activities integrating cost, schedule and technical requirements, to coordinate budget, to provide guidance for project and functional planning as well as plans integration, to ensure reporting and support to the status reviews, to define, develop, implement , integrate and improve the Engineering processes and performance measurements, common methods, rules and standards, to support plan, management and control improvement initiatives, to provide record keeping and to interface ICT for tools development.

This Unit includes:

- PROCESSES, METHODOLOGIES & TOOLS is tasked to:
  - supporting the definition and ensuring the day to day application of common, effective processes, methodologies, procedures and operating mechanism consistently with the Engineering evolution, managing the functional links with the "Process Focal Points", with the aim of improving further Engineering performances.
  - interfacing, as single point of contact, with ICT in order to:
    - transfer the functional requirements to be implemented,
    - evaluate the technological solutions proposed by ICT versus functional requirements,
    - monitor the implementation of the ICT applications to guarantee their consistency against the Engineering needs (eg: time, requirement coverage, etc.),
    - identify and drive the Engineering resources responsible for executing and approving the user test.
  - Providing engineering standard, product master data, and record keeping.
  - Continuously monitoring engineering performances contributing to identify and implement improvement initiatives.

  Reports to "Processes, Methodologies & Tools":

  - PROCESSES & PROCEDURES
  - DATA MANAGEMENT

- PLANNING, CONTROL & BUDGETING is tasked to:
  - supporting the definition and ensuring the day to day application of the planning & control model and relevant management reporting, coherently with earned value approach, with the aim of further improving Engineering performances.
  - Supervising the Engineering budgeting and investment processes, and the deployment of that budget, interfacing with AFC as necessary.
  - Managing the Engineering offload, from a technical point of view.
  - Continuously monitoring engineering performances contributing to identify and implement improvement initiatives.

  Reports to "Planning, Control & Budgeting":

  - PLANNING & PROGRESS REVIEW

- **SYSTEM MONITORING & QUALITY ASSURANCE**

  This function is tasked with the continuous review of the Design Assurance System including the organizations functionally linked with the DO, those portions of the PO dealing with the interfaces between DO and PO (ref. C750-02-006) and subcontractors for design activities. The structure of the SYSTEM MONITORING & QUALITY ASSURANCE is reported in doc. C740-10.

  It includes the following functions:

  - SYSTEM MONITORING COORDINATION dealing with preparation and management of annual audit plans, corrective action management, interface with AGUSTA DOA ENAC/EASA Team Leader.

- ♦ HELICOPTER SYSTEM MONITORING and AVIONIC SYSTEM MONITORING.
  These functions are responsible to monitor the DAS inside of Agusta facilities (Anagni, Brindisi, Cascina Costa, Frosinone, Philadelphia, Vergiate, Yeovil), the interface with other functions specified at paragraph 4, the subcontractors and partners design organizations for the helicopter and avionic system.

System Monitoring function operate through the activity carried out by auditors who may be part of the function or may be functionally linked to it when dealing with matters of competence. Audit teams may be supported, when necessary, by specialists belonging to any other function as appropriate. Auditors are qualified and appointed in compliance with the procedure AQ 18-08. The document C740-10, which is managed by the Head of SYSTEM MONITORING and updated in agreement with AGUSTA DOA ENAC/EASA Team Leader, is the list of approved auditors.

NOTE: the independence of audit teams, including specialists, from functions/activities being audited, is assured.

- **TRANSMISSION SYSTEMS D&D**
  This function is part to the AW Transmission Mechanical Parts Centre of Excellence (TcoE). It is tasked with design, development, testing of the drive system. It has also the task to prepare the relevant portion of the CCL and to show compliance with the airworthiness rules of competence. This function operates in accordance with the procedure n. PRF-SCC-018-00. To deal with test specimen, test instrument and fixtures, the procedure n. 100-50-157 is applied. A number of functions report to "Transmission Systems (TS) D&D" of which those relevant for airworthiness are:

  - ♦ TRANSMISSIONS LABORATORY (ITA) tasked with testing the transmissions and mechanical components. This laboratory operates in accordance with the procedure n. PRF-SCC-015-00. See Appendix 4.
  - ♦ PRODUCT IMPROVEMENT tasked with the aim of increasing the understanding of the Customer needs within the TS D&D and improving the Customer satisfaction for the TcoE products and services by continuous product improvement and by immediate problems resolution; he will personally manage for the assigned fleet Drawing Methodologies and In-Service A/C improvement whilst, reporting to him, is identified:
    - ❖ SUSTAINING ENGINEERING ITA
    - ❖ IN-SERVICE A/C IMPROVEMENT
    - ❖ DRAWING METHODOLOGIES
    - ❖ LICENCES
  - ♦ TAIL ROTOR DRIVE AW139/AW149/VH71/T129 in accordance with TcoE principle written above is responsible for the locally based activities related to selected transmission modules (essentially pertaining to tail rotor drive systems) interfacing with the relevant CP who remains responsible for the overall drive system integration.
  - ♦ TECHNOLOGIES & INNOVATION tasked with the aim of pursuing the technological excellence of the TS D&D and sharing the internal know-how between the different projects and across the geographies; reporting to him are confirmed the following Specialists:

- ❖ GEARS:
  - ❖ LUBRICATION
  - ❖ RESEARCH PROJECTS
  - ❖ STRUCTURAL ANALYSIS
  - ❖ SENSORS
  - ❖ DYNAMICS, VIBRATION AND NOISE

- ♦ The Chiefs Project (CP) of the product lines.

- **ENGINEERING LICENSES**

  This function is part of the AW PRODUCT SUPPORT organisation.

  It is tasked with the functions and responsibilities of CPE for the Agusta products handled under license agreement with Bell and Sikorsky.

  It is also tasked with design, development, certification, configuration control and continuous airworthiness of all helicopters built under Licences from Bell and Sikorsky.

- **PRODUCT SUPPORT ENGINEERING**

  This function is part of the AW PRODUCT SUPPORT organisation and in particular it includes the following functions under DOA rules:

  - ♦ TECHNICAL PUBLICATION SERVICES tasked with the editing, validating and distributing of Technical Publications and Instructions for Continued Airworthiness (e.g. Service Bulletin). It operates in accordance with the procedures PRO.FSE.052.02 and PRO.FSE.026.96.

    See also 100-50-176 for the involvement of this function in the TIP.

  - ♦ PSE COMMERCIAL HELICOPTERS
  - ♦ PSE LICENCE HELICOPTERS
  - ♦ ENGINEERING SERVICES tasked with repair design, tooling design, in-service aircraft modification and technical bulletin preparation across the product lines. It includes:

    - ❖ REPAIRS ENGINEERING tasked with classification and design of repairs and approval of minor repairs for all Agusta products (except EH101). In doing that it has the task to show compliance with the airworthiness rules of competence. The function operates in accordance with the procedure PRO.FSE.019/96. See C750-02-003.2B.
    - ❖ MODIFICATION ENGINEERING see procedure PRO.SPS.075.09 for tasks and responsibilities.

  This function is also tasked responsible for collecting occurrences from the field (for all Agusta products). See documents AQ 13-05.

- **ENGINEERING HUMAN RESOURCES PARTNERS**

  This unit is part of OPERATIONS HR reporting to the Company HUMAN RESOURCES

  As regard the to DAS issues, it is tasked with selecting and managing adequate human resources for the Design Organization needs. It support the ED/HDO in the implementation of the DAS training programs also keeping records of the training activities performed by the personnel.

- **UNITA' DECENTRATA ANAGNI / MANUFACTURING ENGINEERING**
  This function is part of the Anagni plant.
  - It performs Sustaining Engineering in support of the local production plant (process of concessions).
  - It submits to the REPAIRS ENGINEERING function the classification and design proposals of minor repairs to components and parts of the Anagni plant, using the NTR form provided by PRO.FSE.019/96 and in accordance with local procedures.

- **UNITA' DECENTRATA FROSINONE**
  This function is part of the Frosinone plant.
  - It performs Sustaining Engineering in support of the local production plant (process of concessions).
  - It is responsible for record keeping of AB47, AB206 historical technical documents and AB212, AB412 (limited to rotors and rotating controls drawings on paper) in accordance with procedure n. C750-02-003.4.
  - It submits to the REPAIR ENGINEERING function the classification and design proposals of minor repairs to components and parts of the Frosinone plant, using the NTR form provided by PRO.FSE.019/96 and in accordance with local procedures.

The following unit functionally reports to the head of EXPERIMENTAL OPERATIONS (ITA).

- **EXPERIMENTAL SHOP WORKING DOCUMENTATION**
  This function is tasked with working documents, prepared on the basis of the applicable design data, for the modification and maintenance of the experimental aircraft. This function belongs to the PO engineering.

2.4 Engineering Steering Committee

The "Engineering Steering Committee" is chaired by the CTO and is attended by the managers reporting directly to him and the ED/HDO.
Main functions of this committee are:
1. to discuss general policies and specific objectives of the Company and the DO;
2. to discuss and define the way ahead on critical technical and management issues.

3 INDIVIDUAL RESPONSIBILITIES

3.1 General

The persons, within the DO, making decisions affecting airworthiness are:
- the Chief Executive;
- the Management Staff;
- the Certifying Personnel.

Their tasks and responsibilities related to airworthiness are defined below.
In addition, the individual responsibilities associated with each activity are specified in the applicable procedures.

3.2 The Chief Executive

The Chief Executive has the responsibility to ensure that all necessary resources are available to perform the DOA programs in accordance with paragraph 5 of this document. (See GM No. 1 to 21A.239(a), para. 3.1.2).
He signs, for approval, the DOA Handbook and makes it, together with all the related procedures, binding instructions for all the personnel charged with the development and Type Investigation , safety of products. He represents the holder of TC and DOA. (See GM to 21A.265(b)).

3.3 The Management Staff

Those listed in the following paragraphs are the Management Staff of the Agusta DO.
In the disciplines and functions assigned to their structure, they are responsible to the Chief Executive, either directly or through the ED/HDO, for the accomplishments of the functions necessary to satisfy the applicable rule. In particular, the Management Staff is responsible to take the necessary actions, through the proper hierarchical links/ appointed functions:
- to let the Chief Executive ensure that the necessary resources are available;
- to let the available resources be properly used;
- to make sure that the available resources are properly trained in accordance with paragraph. 6 of this document.

A “Form Four” is prepared for each of the Management Staff, see procedure 100-50-173.

3.3.1 The ENGINEERING DIRECTOR (HEAD OF DESIGN ORGANIZATION – HDO)

3.3.1.1 The ED/HDO is responsible to nominate:

- the CPE acting as a deputy of the ED/HDO in product line for which he is responsible;
- the CVEs;
- the CS-DO
- the persons delegated to :
  a) review, classify Concession / MDR and sign disposition on Minor "Use as is" and Minor "Use repaired with already known repair action" ones, see AQ 13-15,
  b) review, classify Deviation / Production Permit and sign disposition on Minor ones, see AQ 09-06 and AQ 09-11;
- the Sustaining Engineers (SE), persons authorized to process the "Drawing Changes Authorization" (AMD) according to 100-50-198;

and to:

- delegate the Head of "Repair Engineering" department to classify repairs and approve minor repairs according to C750-02-003.2B;
- sign, for approval, the DOA Handbook and issue DO procedures;
- sign the declaration of compliance for new projects or modifications (usually the ED/HDO signs directly for new projects) to signify that the applicable airworthiness requirements have been complied with, the Type Investigation is satisfactorily completed and the procedures of the Handbook have been followed;
- approve the DAS training program;
- keep on file the personal records of the Management Staff and of personnel making decisions affecting airworthiness and environmental protection, see procedure 100-50-173;
- assure the resolution of conflicts between Agusta Team Specialists, arising from CVEs decisions and between Agusta and Authority Team. See C750-02-003.1 paragraph 1.1.5.

Record of the delegated personnel and of the authorized SEs is provided in document n. 100-50-194.

3.3.1.2 The ED/HDO is also responsible, with the support of the CE, of all activities listed under para. 3.3.2.

3.3.2 The CHIEF ENGINEER (CE)

The role of the CE is to assist and support the ED/HDO in all these engineering activities:

- managing the activities of the DO in accordance with the policies established by the upper management;
- assuring the design of the overall "aircraft system" both by the DO and by partners/ subcontractors;
- assuring full and complete liaison between the DO and related organizations having responsibility for products manufactured to type-certificate. See paragraph 4 for details;
- assuring that the processes of the DO are carried out in accordance with the DOA Handbook and the applicable procedures;

- providing the assurance to the Agency that prototype models and test specimens adequately conform to the proposed type design;
- assuring the evaluation of feedback from production and resolution of non conformities, and assure accomplishment of activities deriving from incidents and accidents as necessary for continued airworthiness;
- assuring that compliance of the designs with the applicable airworthiness and environmental protection requirements is considered and demonstrated;
- assuring the continued airworthiness and safety of the experimental aircraft and of the operational fleets;
- assuring that corrective actions on processes and procedures are effectively implemented on the basis of DAS Monitoring findings;
- assuring the preparation and updating of all maintenance and operating instructions (including Service Bulletins) needed to maintain airworthiness (continuing airworthiness) in accordance with the relevant Certification Specification. Ensure that those documents are provided to all affected operators and all involved Authorities;
- acting as the Company interface with the AA, including the authority to sign for applications and for documents transmittal;
- coordinating the CPE activities;
- evaluating events occurred on specific product line in order to determine their effect on airworthiness of other Agusta product;
- managing the design, development and qualification of aircraft modification and improvement projects, (both from the Airworthiness and Customer satisfaction point of view) coordinating and controlling the tasks across Engineering functions and coordinating with other sectors of the Company (CoEs, Customer Support, Procurement, Programmes & Products Groups);
- managing the Engineering interfaces and contributing to the activities of rulemaking with Airworthiness Authorities;
- managing the Engineering interfaces with civil customers for in service support.

In this role of assistance and support to the ED/HDO, and for the activities of this paragraph, the CE has the authority to sign the related documents.

3.3.3 The CHIEF PROJECT ENGINEER (CPE)

The CPE acts as a deputy of the ED/HDO in the product line for which he is responsible.

The CPE is delegated by the ED/HDO for the assigned product to sign the technical documentation consisting of the Type Design, to approve the changes to the Type Design, to approve the instructions related to the application of changes, to sign the statement of compliance, to make determinations on Minor “Use repaired with new repair action” and Major production non conformities, to approve the repairs, to approve the aircraft required manuals.

The CPE is responsible to:

- assure the design and development of the overall aircraft system either through his own structure or through the pertinent design functions of the DO;
- support the office of Airworthiness, in establishing the Type Investigation Program and Compliance Check list, approving, as deputy ED/HDO, TIP and CCL;

- assure planning of the activities of competence and coordination with the appointed Airworthiness Engineer for the scheduling of the TIP;
- assure that prototype models and test specimens adequately conform with the proposed type design;
- assure control of the configuration of the product under responsibility; this includes:
  a) issue of the documents defining the Type Design at TC and the subsequent changes,
  b) approve the classification of changes to type design and grant the approval of minor change on the basis of the related privilege;
- sign the Declaration of Compliance for new project or modifications (usually the CPE signs for modifications) to signify that the applicable airworthiness requirements have been complied with, the Type Investigation is satisfactorily completed and the procedures of the Handbook have been followed;
- monitor significant events on other aeronautical products as far as relevant to determine their effect on airworthiness of Agusta product line under responsibility;
- assure the evaluation of feedback from production and operation (incidents and accidents), the implementation of activities necessary for continued airworthiness and the reporting to the Agency according to Part 21A.3(b);
- maintain the continued airworthiness and safety of the experimental aircraft and of the operational fleets for the product line under responsibility;
- advise the Authority with regard to the issue of related Airworthiness Directives, in general based on Service Bulletins, according to Part 21A.3B;
- assure preparation and approval of Service Bulletins;
- assure, as required, Company approval of the aircraft manuals.
- approve Minor (Use repaired with new repair action) and Major production non conformities (Concession /MDR); see AQ 13-15.
- approve Major and Critical Deviation / Production Permit; see AQ 09-06 and AQ 09-11.
- analyze and accept the AMD according to the document 100-50-198;
- approve major repairs;
- define and approve the Flight Conditions (FC) on the basis of the related privilege. See the document C750-02-003.2C and 100-50-197.

3.3.4 The HEAD of the OFFICE of AIRWORTHINESS

The Head of the Office of Airworthiness is responsible to:

- assure liaison within the DO and with the Agency with respect to the Type Investigation;
- appoint and assign tasks to the AEs;
- assure coordination of CVE activities;
- assure preparation of Type Investigation Programs for new projects as well as for modifications. This includes type certification basis, special conditions, classification of changes in coordination with the CPE, definition of MOC, definition of DAS and AA involvement;
- assure planned (based on CPE and specialist functions inputs) management of TIPs;
- coordinate relationship with foreign aviation authorities and management of related grant of approvals
- assure guidance/ advice in certification issues, e.g. interpretation of rules, alternative means of compliance, equivalent safety items, classification of changes (requiring AA assistance as necessary);

- assure that all compliance documents are prepared as necessary to show compliance with all airworthiness requirements, as well as for completeness and to ensure that they are signed by the appointed CVEs and AE for release;
- assure preparation and updating of the aircraft manuals in co-operation with “Product Support Engineering”;
- assure that the required Type Design Definition documents are prepared and approved as appropriate;
- recommend to the ED/HDO or to his deputy (CPE) the declaration of compliance when the activities required by the TIP are properly completed;
- assure that activities are carried out as necessary for the release of Special Cat. Certificates of Airworthiness, special flight or similar authorizations;
- assure the management of major repair approval;
- coordinate the activities necessary to achieve and maintain the Design Organization Approval, assuring liaison between the Agusta DO and the Airworthiness Authority and promoting application of the DAS principles and procedure to the DO activities;
- assure that the Handbook is prepared and updated; issue guidelines for documenting compliance, and cooperate with the ED/HDO in issuing guidelines for the preparation of the manuals required by the applicable rules, Service Bulletins, drawings, specifications and standards, in cooperation with the Heads of DAS Monitoring and “Processes & Procedures” office;
- prepare budgets for the Airworthiness Office;
- assure knowledge of the state of the art in the field of airworthiness, operational and environmental rules participating, as appropriate to their elaboration in the international regulatory activity;
- assure record keeping of matter of competence;
- promote the training of the personnel involved in the DAS in accordance with paragraph n. 6 of this document;
- assure the management of the approval of the FC and the PtF process. He is the responsible for the phase of check and release of the documentation supporting the issue of the PtF. See C750-02-003.2C and 100-50-197.

3.3.5 The HEAD OF SYSTEM MONITORING & QUALITY ASSURANCE

The Head of System Monitoring and Quality Assurance is responsible to:

- implement and manage a system for continuing evaluation of DO compliance with applicable EASA Part 21 requirements trough the verification of the adequacy, effectiveness and compliance with the DAS Procedures;
- assure that audits are carried out;
- planning the audits including teams definition; *
- managing the audits and reporting on the results; *
- keeping the records of the activities; *
- cooperate with the Heads of the Airworthiness Office and “Planning & Control Technical Services” for the continuous updating / improvement of the DAS procedures;
- assure a feed back to the ED/HDO when necessary for corrective actions arising from finding of deviations in respect of these procedures;
- keep the file of the appointed auditors. In particular this activities are performed by the function SYSTEM MONITORING COORDINATION (see paragraph 2.2).

3.4 Departments, Areas and Offices linked to ED/HDO

3.4.1 The Heads of Main Departments

The Heads of Main Departments (Helicopter System Design, Electrical and Avionic Systems D&D, Airframe Systems D&D, Structures D&D, Rotor Systems D&D, Transmissions D&D, Structural Test and Technologies Laboratory, Experimental Operation and Flight Test, Processes & Planning, Project Manager Type A109 – All variants/models) are responsible to:

- establish general methodologies and procedures to be applied in the activities covered by the Department, consistently with the current state of the art;
- assure the validation of methodologies for design and analysis. For the validation of the relevant software, excluding that already certified when purchased like CATIA, NASTRAM, etc., see the procedure n. 100-50-178;
- define work sharing between Offices or Technical Areas of the Department;
- assure liaison with other Departments in order to identify interface items and promote actions for their resolution;
- support the office of Airworthiness: in the definition of the means of compliance and certification programs;
- support the CPE in the resolution of problems rising from production or operation and the definition of appropriate actions for continued airworthiness;
- co-operate with the Airworthiness Office in order to achieve an effective planning of the TIP;
- report to the CPE for problems that are specific of the relevant product line, including interface problems;
- report to the ED/HDO for matter of general nature related to the activity of the department.

In addition:

The Head of “Engineering Licenses” is responsible to:

- discharge the responsibilities of CPE / deputy ED/HDO for the a “Licenses” helicopters;
- assign individual tasks to the staff personnel taking into account their competence and experience;
- assure the showings of compliance with the airworthiness rules of competence;

3.4.2 The Heads of Areas and Offices

In general, the Heads of Areas and Offices are responsible to:

- assign individual tasks to the staff personnel taking into account their competence and experience;
- make sure that the available resources are properly trained in accordance with paragraph 6 of this document;

In addition:

The Heads of Areas and Offices tasked of design and development are responsible to:

- assure design and development in the discipline or subsystem under their competence;
- assure the use of validated design and analysis methodologies;
- assure that showings of compliance with the airworthiness rules of competence are performed in accordance with the TIP;
- assure planning of the activities of competence and coordination with the appointed AE for the scheduling of the TIP;

- review and classify production non conformities for matters of competence. Sign dispositions on Minor (Use as is) and Minor (Use repaired with already known repair action) Concession / MDR (See AQ 13-15). Sign dispositions on Minor Deviation / Production Permit (see AQ 09-06 and AQ 09-11). See the document 100-50-194.
- assure investigation and technical definition of appropriate actions related to failures, malfunctions and defects.

The Heads of Areas and Offices tasked of testing are responsible, as appropriate to:

- assure that showings of compliance with the airworthiness rules of competence are performed in accordance with the TIP;
- assure the use of recognized testing methods;
- assure the use of validated methods for the analysis of data;
- assure the use of test articles conforming to the applicable design data;
- assure planning of the activities of competence and coordination with the appointed AE for the scheduling of the TIP.

The Head of "Repair Engineering" is responsible to:

- classify the repairs and approve minor repairs (under ED/HDO delegation) in accordance with PRO-FSE-019/96;
- design the repairs and the assigned changes to the approved Type Design;
- assure the use of validated design and analysis methodologies;
- assign individual tasks to the staff personnel taking into account their competence and experience;
- assure the showings of compliance with the airworthiness rules of competence;

The Head of "Product Support Engineering" is responsible to assure:

- the preparation, validation and edition of the Technical Publications in accordance with the procedures PRO.FSE.052.02;
- the distribution of the Technical Publications in accordance with PRO.FSE.026.96;
- the collection from the field of the occurrences and their management in accordance with AQ 13-05.

The Head of "Planning & Control Technical Services" cooperate with the Heads of DAS Monitoring and the Head of Airworthiness Office for the continuous updating / improvement of the DAS procedures.

3.4.3 Head of Main Departments and the Heads of Areas and Offices functionally linked with the ED/HDO

The Head of Main Departments and the Heads of Areas and Offices functionally linked with the ED/HDO assure:

- full compliance to the applicable rules and procedures of Part 21;
- conduction of the relevant activities following the tasks, responsibilities and procedures of the DOA Handbook;
- effective and timely corrective actions when required by the DAS monitoring;
- that no changes are made to the approved procedures and organization without agreement of the ED/HDO;

3.5 The Certifying Personnel

3.5.1 COMPLIANCE VERIFICATION ENGINEER (CVE)

For the areas of competence assigned by the ED/HDO, the CVE is responsible to:

- concur with the TIP for the matters of competence, including applicable requirements and methods of compliance;
- verify the showings of compliance through documents and actual activity review. The documents and activity review is related both to the Agusta and to the partners/ sub contractors ones;
- sign compliance documents, including test programs and data necessary for verification of compliance with the applicable Certification Specification and environmental protection requirements as defined in Type Investigation Programme.

  Note: the CVE signature on a compliance document means that the CVE, having examined the document, is satisfied that the technical content is adequate and correct for the purpose of showing compliance with the airworthiness requirements quoted in the "Compliance Assessment" section of the document as defined in the TIP.
- Approve the technical content (completeness, technical accuracy etc) of the Manuals required by the applicable rules;
- discuss the showings of compliance with the AA, taking part in certification meetings, Certification Review Item (CRI) and Certification Action Item (CAI) processes;
- support "Airworthiness" in rule making and interpretation of rules.
- assure the independent technical verification of the analysis, calculations, tests or other means used to determine under which conditions or restrictions the aircraft can perform the intended flight(s) safely. See FC approval process according to the document 100-50-197.

More detailed definition of the CVE tasks and responsibilities is provided in the document n. 100-50-175

3.5.2 AIRWORTHINESS ENGINEER (AE)

For the programs of competence assigned by the Head of the Airworthiness Office, the AE is responsible to:

- Collect and integrate the Technical Departments input for the TIP for assigned programs. This includes, as applicable, type certification basis, special conditions, CCL, definition of MOC, definition of DAS and AA involvement;
- sign, for check (completeness) and release, the TIP and the compliance documents, quoted in the TIP;
- manage (based on CPE, departments, offices and areas inputs) the TIP and the relevant schedule;
- coordinate the process of approval of the manuals required by the airworthiness rules;
- manage the approval process of repairs;
- liaise with the appointed AA personnel and represent the Office of Airworthiness in the specialist meetings with the AA;
- co-operate with the H/AERON on assigned tasks, which falls under the responsibilities of the Office of Airworthiness (special Category Certificates of Airworthiness, Special Flight Authorization, management of rules….);
- assure the record keeping for the assigned tasks;

- coordinate and manage the process for the definition / approval of the FC. See C750-02-003.2C and 100-50-197.

More detailed definition of the AE tasks and responsibilities is provided in the document n. 100-50-175.

3.5.3 CERTIFYING STAFF OF THE DESIGN ORGANISATION (CS-DO)

The Certifying Staff of the Design Organisation assigned by ED/HDO is responsible to:

- assure the compliance of the helicopter configuration with the approved FC;
- perform the activities and the checks related to issue of a PtF;
- issue of the PtF under the privilege, when applicable.

Further details of the CS-DO tasks and responsibilities are provided in 100-50-197.

3.5.4 INDEPENDENT TECHNICAL VERIFIER (ITV)

For the areas of competence assigned by the ED/HDO, the ITV is responsible to:

- assure the independent technical verification of the analysis, calculations, tests or other means used to determine under which conditions or restrictions the aircraft can perform the intended flight(s) safely;
- sign the AG Form 59 as applicable (see document 100-50-132).

Further details of the ITV tasks and responsibilities are provided in 100-50-197

3.6 DO appointed persons

The following is the list of DAS appointed persons. Those persons are authorized, in the frame of Design Organization, to sign on behalf of Agusta, statements or documents related to the accomplishments of the functions necessary to satisfy the applicable rule, in accordance with their assigned responsibilities.

CHIEF EXECUTIVE

Spagnolini Bruno

ED/HDO

Nannoni Fabio

CE

Raggi Marco

CPE

Cicale' Marco	Type A109 (all variants/models except A119, AW119MKII, A109LUH, A109N)
Dioli Marco	Type A109 (A119, AW119MKII variants/models only).
Orlandi Diego	EH101
Pauletti Juri	Type A109 (A109LUH, A109N variants/models only).
Ragazzi Matteo	AW139*

Ricci Moretti Luigi Umberto	Agusta products handled under license agreement.

* AW139 and AB139 are two names for the same product. They identify two batches of aircraft manufactured in conformity with a unique Type Certificate Data Sheet see EASA TCDS.R.006 Note 2 for applicable serial numbers.

Notes:

1) The following CPE is in charge for a civil program (not under the DOA) with Agusta not being the TC applicant:

Scorbati Silvano	BA609 (Agusta share)

2) The following CPEs are in charge for Military programs:

Battisson Chris	Sea King – Puma – Gazelle
Ferretti Massimo	T-129
Juggins Philip	Apache – Chinook
Medici Luca	AW149
Orlandi Diego	AW101
Pauletti Juri	A109 military versions
Staple Alan	Lynx / AW159
Turati Davide	NH-90 (Agusta share)
Valsecchi Giorgio	A129 EI

HEAD OF REPAIR ENGINEERING

Paolo Fedele

HEAD OF AIRWORTHINESS OFFICE

Gino Gianluigi

AIRWORTHINESS ENGINEERS

Bertolami Gabriele
Cavazzoni Moreno (in training)
Colombo Mario
Franchi Davide
Graham Jeremy
Luini Luciano
Oggioni Franco
Puricelli Giovanni Maria
Torelli Gabriele
Vanoni Massimo

CVE

Name	Acronyms (1)	DISCIPLINES/LIMITATIONS	For assigned programs(3)	Type A109	AW139	EH101	Licences
Alemanni Claudio	GIA	Electrics and avionics					X
Atti Tiziano	ENG	Engine installation and related systems, engine cowlings		X	X	X	X
Bonaita Giovanni	PDV	Flight issues, cockpit evaluation and flight manual	X				
Bovio Riccardo Pierino	ATT	Drive system		X	X	X	X
Caramaschi Vittorio	DYN	Dynamics		X	X	X	X
Comparin Franco	ATS	Structures (cabin, tail, fin, aerodynamics surfaces), cowlings, controls, landing systems/ design aspects and static substantiation		X			
Dossena Giorgio	SAF	Systems Reliability & Safety		X	X		
Fieni Renato	HYD	Hydraulic systems, rotor brake. See note 2	X				
Fitzsimons Keith	ATS	Forward fuselage, cabin & cowlings, main rotor blades, yaw limiter				X	
Godi Ilario (as of 01.05.2011)	PT	Technical Publications		X	X	X	X
Iannucci Dario	GIA	Electrics and avionics			X		
Joyce Bernard	GIA	Electrics and EMC				X	
Kluzer Alberto	PDV	Flight issues, cockpit evaluation and flight manual	X				
Maffioli GianCarlo	ATR/FAT	Rotors and rotating controls, Fatigue / Rotor test Surveillance		X	X	X	X
Maino Bruno	DIA/ACS	Diagnostics, acoustics		X	X	X	X
Malosetti Maurizio	CS	Cabin safety	X				
Mariani Ugo	FAT	Fatigue			X	X	X
Massey Colin	ATS/HYD	Forward fuselage, cabin & cowlings, Fore and Aft Undercarriage (when issues associated with ditching arise); Flotation System & Ditching				X	
Matteucci Domenico	ATS	Structures (cabin, tail, fin, aerodynamics surfaces), cowlings, controls, landing systems/ design aspects and static substantiation		X	X	X	X
Naylor Pete	GIA	Software for avionics. AFCS (where software other than AMS is involved)				X	
Oggioni Franco	ATR	Rotors and rotating controls				X	
Paggi Bernardino	PDV	Flight issues, cockpit evaluation and flight manual	X				
Pearce Mike	HYD	Heating, ventilation & cooling (incl. avionics cooling); air start				X	

Name	Acronyms [1]	DISCIPLINES/LIMITATIONS	For assigned programs[3]	Type A109	AW139	EH101	Licences
Peron Luigi	GIA	Electrics and avionics		X			
Preatoni Marzio	PBE	Flight and ground loads		X	X	X	X
Rivera Massimo	GIA	EMC, HIRF and Indirect Effects of Lightning		X	X	X	
Roe John	GIA	Electrics and avionics (except software)				X	
Rovellotti Raul	FAT	Fatigue		X			
Sardelli Giuseppe	ATS	Structures (cabin, tail, fin, aerodynamics surfaces), cowlings, fixed flying controls, landing systems		X			
Silva Antonio	SOF	Software		X	X	X	X
Vanoni Massimo	ENG/HYD	Engine installation and related systems, ECS, flotation, rotor brake, rescue hoist, ice detector. See note 2	X				
Vellacott Steve	CS	Production Trim and cabin safety/ fire protection				X	
Wilson Alan	SAF	Systems Reliability & Safety				X	X

NOTE 1: For CVE's terms of reference see the document 100-50-175. See also the acronyms listed in the following table.

NOTE 2: as regard the quoted auxiliary installations, the authorization is related only to the activities of competence of the Airframe Systems D&D (ATIM in 100-50-175).

NOTE 3: when the appointment is given with the wording "for assigned programs", the actual appointment comes from the definition of the team for the specific activity.

TABLE of RESPONSIBILITIES (TOR) for CVE – ACRONYMS (Rif. 100-50-175)

ACS	*CVE acoustic*
ATR	*CVE rotors and rotating controls*
ATS	CVE *structures (cabin, tail, aerodynamic surfaces, fin), landing systems, cowlings fixed flying controls*
ATT	*CVE drive systems*
CS	*CVE cabin safety*
DIA	*CVE diagnostics / HUMS (Health and Usage Monitoring Systems)*
DYN	*CVE dynamics*
ENG	*CVE engine installation and related systems, engine cowlings, environmental protection*
FAT	*CVE fatigue*
GIA	*CVE electric and avionic systems*
HYD	*CVE hydraulics, ECS (Environmental Control Systems), floats, rotor brake*
PBE	*CVE flight and ground loads*
PDV	*CVE flight issues, cockpit evaluation and flight manual*
SAF	*CVE safety and maintenance*
SOF	*CVE software*
PT	*CVE Technical Publications*

CERTIFYING STAFF OF THE DESIGN ORGANISATION

For experimental aircraft managed by the PO:

Cirelli Claudio	Type A109
Ferriello Pietro	Type A109
Piazza Mauro	Type A109
Luchena Lorenzo	AW139
Tentolini Luciano	AW139
Russo Carmine	AW139

For all experimental aircraft:

Guirreri Alessandro	All models

HEAD OF SYSTEM MONITORING

Meschi Giuseppe

INDEPENDENT TECHNICAL VERIFIER

The names of the appointed ITVs are listed in the document 100-50-197.

OTHER APPOINTED PERSONS
The names of all appointed persons are reported in Appendix 1.

4 INTERFACE BETWEEN DESIGN ORGANISATION AND OTHER FUNCTIONS

4.1 General

In order to ensure accomplishment to all tasks associated with Type Certification, post TC activity and continued airworthiness, the DO established appropriate interfaces with the following functions / Directions or Divisions: (see Fig. 1)

- Production (Helicopter Division and Transmission Division)
- Subcontractors
- Product Support
- Experimental test pilots
- Other Production Organizations

Relationship and links between the DO and the other involved functions are described in the following paragraphs.

The procedures C750-02-003.6 lists the arrangements established between Agusta DO and the Production Organizations.

4.2 Agusta Design Organization and Agusta Production Organization

Links and share of responsibilities between design and production processes are dealt with by the interface procedure C740-15. This procedure covers also interfaces between the Agusta DO and purchasing department.

4.3 Agusta Design Organization and Subcontractors

The procedures C750-02-003.7 and IQS-015 are applicable to the recognition/ qualification of subcontractor's Design Organizations for the design of parts or appliances under Agusta design responsibility.
The procedure C750-02-003.5 is applicable to the recognition/ qualification of parts and appliances designed by a subcontractor under Agusta design responsibility.
These procedures refer to the relationship between the Agusta the subcontractor's DOs.
The procedures C750-15 and IQ S015 are applicable to the manufacturing by a subcontractor's Production Organization of parts and appliances under Agusta design responsibility. These procedures refer to the relationship between the Agusta DO and the subcontractor's PO.

4.4 Agusta Design Organization and Product Support

The procedures C750-02-003.3 and 100-50-140 are applicable to the transfer of information on continued airworthiness.
The procedure PRO-FSE-019/96 is applicable to the transfer of information on repairs.

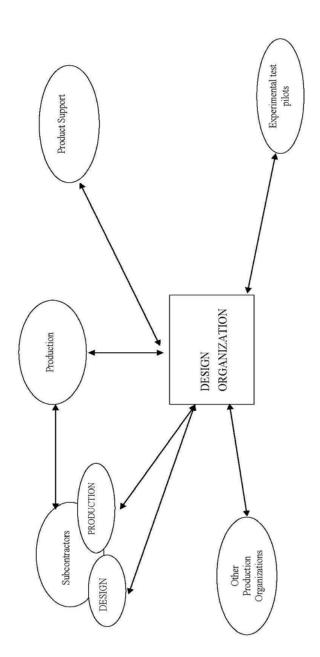
4.5 Agusta Design Organization and experimental test pilots

The Agusta experimental test pilots are part of the Agusta Operations Direction.
The head of Experimental Operation & Flight Tests is responsible of the proper co-ordination with the experimental test pilots.

4.6 Agusta Design Organization and other Production Organizations

Special agreements may be established with Production Organizations other than Agusta PO for manufacturing aircraft of which Agusta retains the Design Authority under its DOA.
In such events in order to assure proper link and coordination, the relevant obligations and responsibilities between the Agusta DO and the third party Production Organizations will be defined through appropriate documentation. The arrangements established are listed in procedure C750-02-003.6.

FIG. 1

Product Support
Experimental test pilots
Production
DESIGN ORGANIZATION
Subcontractors
PRODUCTION
DESIGN
Other Production Organizations
= interface

5 HUMAN RESOURCES

The implementation of the basic principles of the DAS, laid down under paragraph 1 of this document, requires that the staff in all technical departments are of sufficient number and experience on top of having been given the authority to be able to discharge their allocated responsibilities.

Document n. 100-50-173 indicates the qualifications and the experience criteria to be followed for the appointment of the following personnel of the DO:

- Head of Design Organization
- Chief Project Engineers
- Heads of Main departments
- Head of Areas and Offices
- Head of the Office of Airworthiness
- Head of the Design Assurance System Monitoring
- Compliance Verification Engineers
- Airworthiness Engineers
- Certifying Staff of the DO
- Chief Projects
- Delegated personnel to review, classify and make a decision on production non conformities
- Head of the Repair Engineering department
- Sustaining Engineers
- Independent Technical Verifier

Document n. 100-50-173 also indicates the methods for collecting and keeping their records of qualification and training.

See Appendix 2 for the AW Engineering Organization available human resources.

6 TRAINING OF PERSONNEL

6.1 Objectives

The objectives of training in the frame of DOA are:

- to promote development and diffusion of a common culture tuned to the basic DAS concepts;
- to give personnel involved in the DAS activities a standardized approach and behaviour consistent with AA procedures and practices in dealing with design problems;
- to provide and maintain a sound background of knowledge in the field of aviation requirements and policies to the personnel involved in the demonstration and verification of compliance.

Training is provided to all the personnel in charge of Airworthiness functions in relation with their specific tasks and responsibilities. When the bulk of the personnel has achieved a good understanding of the matters of interest, continuous training programs are organized, as required, to update the knowledge on specific subjects and to introduce new personnel in the system.

6.2 Training Management

The Heads of the functions described under paragraph 2 of this document are responsible to identify the training needs on DAS issues for the personnel available in their department and make the relevant proposals to the Head of the Airworthiness Office.
The proposals are evaluated for adequacy by the Head of the Airworthiness Office and by the ED/HDO.
In addition to the above, the ED/HDO, the Head of the Airworthiness Office and the Head of the DAS Monitoring evaluate the results of the monitoring activity from the previous year and identify any needed integration to the training program.
Once the DAS training programs are approved by the ED/HDO, an annual training plan is issued covering the needs of all DO departments.
This plan becomes a binding commitment for its organization and implementation by the training function of the company personnel department.
The company personnel department is responsible to record the progress of the plan and to update the personal files of the trained personnel.
The DO system monitoring is responsible to monitor the implementation of the plan and the relevant record keeping.

6.3 Training subjects

Taking into account the objectives of training, as expressed in 6.1, the subjects of training are in general those indicated in Appendix 3 together with the personnel interested to each subject.
The annual training plan accommodates specific needs that are identified time to time.

7 LIST OF APPENDICES

Appendix	1	AW Engineering Organisation structure
Appendix	2	Human resources of AW Engineering Organization
Appendix	3	Training
Appendix	4	Location of laboratories and archives

APPENDIX 1

AW ENGINEERING ORGANISATION

The following pages provide the AW Engineering Organisation Structure and the related persons in charge of each function.

- Solid lines connecting boxes mean hierarchical links
- Dashed lines connecting boxes mean functional links

  Note: functional link mean that the specific person/ function reports to the identified responsible person, for the specific activities related to the assigned task.

  Functional links between the Head of the Airworthiness Office and the CVE are described in document n. 100-50-175.
- Dotted boxes means departments functionally linked to ED/HDO.

The AW Engineering Organization

The DOA subset of the AW Engineering Organization

Engineering Chief Technical Officer
L. Marcocci
Engineering Steering Committee
Processes & Planning
A. Di Lello
System Monitoring & Quality Assurance
G. Meschi
Engineering Director HDO
F. Nannoni
Structural Test and Technologies Laboratory
D. Castano
Experimental Operation and Flight Test
V. Vaccaro
Accidents / Incidents Investigations Civil AC
L. Candiani
CoE
CoE
CoE
Helicopter System Design
L. Medici
Electrical and Avionics Systems D&D
C. Brena
Airframe Systems D&D
C. Dell'Andrea
Structures D&D
M. Overd
Rotor Systems D&D
F. Scapinello
Transmission Systems D&D
G. Gasparini
Chief Engineer
M. Raggi
Civil Airworthiness
G. Gino
CPE AW139
M. Ragazzi
Project Manager Type A109
G. Marzorati
CPE A109*: A. Cicalè
CPE A109**: J. Pauletti
CPE A119/AW119MKII: M. Dioli
CPE Licenses
L. U. Ricci Moretti
Customer Support & Services - ITA
CPE AW101 Civil A/C (EH101): D. Orlandi
Functionally linked to HDO. See para. 2.3.
* Type A109 (all variants/models except A119, AW119MKII, A109LUH, A109N)
** Type A109 (A109LUH, A109N variants only)

* Type A109 (all variants/models except A119, AW119MKII, A109LUH, A109N)

** Type A109 (A109LUH, A109N variants only)

Airworthiness
Gino Gianluigi
See para 3.5
Airworthiness Engineers
See para 3.5 and 100-50-175
CVEs

Helicopter System Design
Medici Luca
General Architecture*
Ballerio Dante
Systems Reliability & Safety
Graham Jeremy
Weight Management
Tognetti Renzo
Vehicle Technologies & Aeromechanics
Abdel Nour Pierre
Diagnostic Systems
Maino Bruno
Style*
Cavazza Alessandro
AW149 Helicopter Chief Project*
Medici Luca
AW169 Helicopter Chief Project
Stefano Poggi
Nicetrip Chief Project*
Stabellini Alessandro
Civil Programs
Dossena Giorgio
EH101/AW101*
Nicholas Girling
A109/A119/AW119MKII: *Francavilla Enrico*
AW139/AW149*: *Dossena Giorgio*
AW139: *Barosio Francesca*
Rotor Dynamics and Loads
Monteggia Claudio
Structural Dynamics
Colombo Attilio
Flight Mechanics
Bianco Mengotti Riccardo
Aerodynamics
Saporiti Antonio
Airframe Loads
Crannage Mark
Rotors Aerodynamics: *Andrea D'Andrea*
Fuselage Aerodynamics: *Nigel Scrase*
Aerodynamics Lab. & Wind Tunnel: *Giuseppe Crosta*
Acoustics: *Anthony Pike*
* Not under DOA rules

Electrical and Avionic Systems D&D
Brena Clemente
Processes & Planning
System Monitoring & Quality Assurance
Integration Lab & Avionic Production
Mariani Gian Paolo
Avionics Planning, Control & Budgeting
Ravezzani Gianmario
Process Engineering
Silva Antonio
System Engineering
Innovation & Simulation Human Machine Interface
Tyler David
Software Engineering
Silva Antonio
Automatic Flight Control System (AFCS)/ Fly by Wire (FbW)
Busi Teresio
Electrical Engineering
Tyler David
AW101: Roe John
Lynx*/Apache*/UK In-service*: Wallbridge Andy
US 101*& Ita Gov. AW101*: Formenti Fabio
A109/A119/ AW119MKII: Peron Luigi
AW139: Gobbi Simone
AW149*: Iannucci Dario
NH90*: Podestà Lorenzo
A129 */ T129*: Volo Gianluca
BA609*: Brena Clemente (ad interim)
FbW: Busi Teresio (ad interim)
AFCS Lynx*/ AW101 Handcock Andy
AFCS A109/ AW139/ AW149*/ 129* Majori Emilio Enrico
Vehicle Management System
Franzini Alessandro
Aircraft / Flight Management System
Patriarca Maurizio
Mission Management Systems
Contogiorgos Giorgio
Tactical Processor *
Merrick Andy
FCS
Silva Antonio (ad interim)
Elecotromagnetic Environmental Effects
Musso Luca
Electrical Systems
Hackett Neil
Electrical Installation Design ITA
Marcon Tiziano
Electrical Installation Design UK
Voizey Phil
* Not under DOA rules

Airframe Systems D&D
Dell'Andrea Claudio
System Monitoring & Quality Assurance
Static / Fatigue Stress
Ventura Stefano
Laboratory
Segrini Giancarlo
A109/A119/AW119MKII Airframe Systems
Tagliaferro Giorgio
Hydraulic Systems
Fieni Renato
Fuel Systems
Pearce Mike
Environmental Control Systems
Elks Belinda
Engine Installations
Cowley David
Marine*/General Airframe Systems
Pearce Mike (ad interim)
AW139/NH90*
Robustelli Daniele
A129* / T129* Airframe Systems
Vanni Roberto
Lynx* / Apache* Airframe Systems
Pearce Mike
AW139 Airframe Systems
Atti Tiziano
AW149* Airframe Systems
Metteo Gianni
NH90* Airframe Systems
Dell'Andrea Claudio (ad interim)
US101* - EH 101 Airframe Systems
Cowley Dave
* Not under DOA rules

Structures D&D
Overd Michael
Landing Gear Fixe and Flight Control
Zorz Riccardo
Analysis and Simulation
McLaughlin Alex
Structures Research and Development
Caruso Antonio
Structural Engineering Design Group (Ita)
Gussoni Roberto
Support to Product (UK)*
Gould Paul
Lynx * / Apache *
Mackenzie Gordon
EH101 / AW101*
Close Geof
EH101-VH71 Rear & Tail Brindisi
Stefanelli Marcello
AW149*
Norton Chris
Production Line Structural Engineering
Biaggi Alessandro
Production and Product Support
Biaggi Alessandro (ad interim)
AW139
Dimitri Giuseppe
A109/A119/AW119 MKII
Stefanelli Marcello
Customization Design Sustaining Engineering (Vergiate)
De Giorgio Maurizio
NH90*
Torraco Giuseppe
BA609*
Pietroni Veronica
XX9*
Masiero Enrico
T129*/A129*
Angiolini Fabio
Special Projects
Camparin Franco
* Not under DOA rules

- **Rotor Systems D&D** — *Scapinello Francesco*
  - Manufacturing Engineering — *Leone Antonio* (dashed line) — CoE Blades & Composite Rotor
  - Rotor Support — *Dal Zotto Giorgio*
  - Rotor Methods — *Wood Peter*
  - Rotor Blades — *Auger Colin*
  - Hubs & Rotating Controls — *Losi Fabrizio*
  - AW169* — *Giovanni Facchini*
  - EH101 / AW101* — *Auger Colin (Interim)*
  - Lynx*/ Sea King*/ Apache* — *Redman Roger*
  - AW159* — *Phipps Paul*
  - AW139 — *Lazzarato Stefano*
  - A109/A119/ AW119MKII — *Platini Emilio*
  - AW149* — *Dunn Shaun*
  - A129*/T129* — *Nebuloni Maurizio*

** Not under DOA rules*

Transmission Systems D&D
Gasparini Giuseppe

- Product Improvement – *Colombo Dario*
  - Sustaining Engineering ITA: *Zanotti Giovanni L.*
  - In-Service A/C improvement: *Colombo Dario (ad interim)*
  - Drawing Methodologies: *Garghetti Giorgio*
  - Licenses: *De Dionigi Giuseppe*
- Transmissions Laboratory ITA – *Locarno Luciano*
- Transmission Laboratory UK – *Griffin Michael*
- Technologies & Innovation – *Zocchi Antonio*
  - Gears: *Sartori Sergio*
  - Lubrication: *Gabrielli Andrea*
  - Research Projects*: Sartori Sergio*
  - Structural Analisys: *Piccioli Massimiliano*
  - Sensors*: Zibetti Alberto*
  - Dynamics, Vibration and Noise*: TBA*
- Sustaining Engineering UK – *Fitzsimons Keith*
- AW101 – VH71* – *La Fortezza Alberto*
- AW139 – AW149* - CMH* – *Motta Nicoletta*
- Lynx * / Apache * – *Newberry Paul*
- NH90* – *Bardinelli Alberto*
- A109-A119-AW119MKII–PT6* – *Solomita Rocco*
- AW129 *- T129* – *Montagna Federico*
- Seaking * – *Fitzsimons Keith*
- XX9 (AW169)* – *Scaltritti Diego*
- Tail Rotor Drive AW139-AW149*-VH71*-T129* – *Dewfall Stephen*

** Not under DOA rules*

Structural Test and Technologies Laboratory
Castano Domenico
Technologies Coordination
Zanotti Carlo
Quality Control
Pettenuzzo Stefano
System Monitoring & Quality Assurance
Fatigue
Mariani Ugo
Non Distructive Inspection
Merletti Luigi
Technologies Laboratory
Geary Brian
Structural Test Laboratory (ITA)
Branca Antonio
Structural Test Laboratory (UK)
White Steve

Operations
Flight Operations
for coordination, see par. 4.5
Experimental Operation and Flight Test
Vaccaro Vittorio
Flight Testing Methodologies
Paggi Bernardino
Instrumentation Calibration Laboratory
Donno Generoso
Flight Test Operation (ITA)
Riccobono Michele
Flight Test & Data Acquisition Systems (UK)
Richard Maidment
Experimental Operations
Carlo Magni
Yeovil A/C Centre Flight Line (2)
Flight Test Information Methodologies
Paganini Luigino
Flight Test Data Analysis
Venn Graham
Flight Test Engineering
Richard Maidment (ad interim)
Flight Test Instrumentation
Latham Philip
Experimental Operations (ITA)
Garlaschelli Paolo
Experimental Operations (UK) (1)
TBA
Flight Test Chief Project (CP)
Data Analysis
Ardizio Sandro
Flight Test Engineering
Donizetti Tiziano
Data Acquisition Systems
Baroni Guido
Performance
Simoni Maurizio
Experimental Shop Working Documentation
Bolamperti Cristian
Experimental Shop
Garlaschelli Paolo
System Monitoring & Quality Assurance
Quality
Alessandro Guirreri
A109S / AW109SP: Castelli Andrea
A119 / A109E / N / LUH / LUH-S: Manera Andrea
A129*: Iulita Renato
AW139: Moiola Walter
AW149*: Montorfano Marco
AW169*: Longo Massimo
NH90*: Santarossa Fabrizio
EH101: Garatti Renato
BA609*: Tucci Paolo
(1) DOA rules implementation in progress
(2) For experimental activities only

** Not under DOA rules*

Note: the list of Auditors is defined in C740-10

HDO
Nannoni Fabio
Engineering Human Resources
Fontana Ettore
Product Support Engineering
D'Angelo Maurizio
Unità Decentrata Frosinone
Sustaining Engineering Production
Amico Giovanni
Ingegneria di Revisioni
Liburdi Matteo
Engineering Licences
L.U. Ricci Moretti

** Not under DOA rules*

APPENDIX 2

Human resources of the departments of the Design Organisation that are in connection with airworthiness.

DEPARTMENT	Total	Workers	Employees	Managers
Engineering Vice President & Staff	3		1	2
Engineering Methodologies & Record Keeping	22		22	
System Monitoring	4[2]		4	
Airworthiness	11		10	1
Project Manager / CPE AW139	15		14	1
CPE EH101	21		20	1
C.P.E. NH90[1]	17		16	1
Project Manager / CPE Type A109 all variants/models	31		29	2
C.P.E. A129[1]	7		6	1
C.P.E. BA609[1]	5		4	1
Helicopter System Design	80	2	73	5
Airframe Systems D&D	46	2	43	1
Rotor Systems D&D	39		38	1
Structures D&D	30		28	2
Structures - Brindisi	32		32	
Electrical and Avionics Systems D&D	233	4	220	9
Experimental Operation and Flight Test	198	69	127	2
Structural Test and Technologies Laboratory	72	17	54	1
Anagni Unit	9		8	1
Frosinone Unit	10		10	
Engineering Licences – Product Support Engineering	144	2	140	2
Transmission Systems D&D	65	7	57	1
TOTAL	1094	103	956	35

[1] Not under DOA rules.
[2] Approved auditors listed in document C740-10 are complementing the total number of resources available for system monitoring.

The above figures do not include the 9 CVEs resident in Yeovil

APPENDIX 3

TRAINING

Module **Attendees**	**A**	**B**	**C**	**D**
Engineering Director / HDO			X	X
Head of Main Departments (HMD)			X	X
Chief Engineer*		X		
Chief Project Engineer (CPE) *		X		X
Head of the Office of Airworthiness (HAERON) *		X		X
Head of Design Assurance System Monitoring (HDASM) *		X		X
Compliance Verification Engineer (CVE)		X		X
Airworthiness Engineer (AE)		X		X
Project Engineer (PE)		X		X
Certifying Staff of the Design Organization		X		X
Head of Areas and Offices	X			X
Head of Areas and Offices reporting to the Management Staff through a functional link	X			X
Specialist	X			X

* For these Functions a extensive course regarding EASA Part 21 requirements shall be provided (e.g. As equivalent JAA or EASA course).

The Modules A, B and C applies to personnel employed for the first time in the above functions.

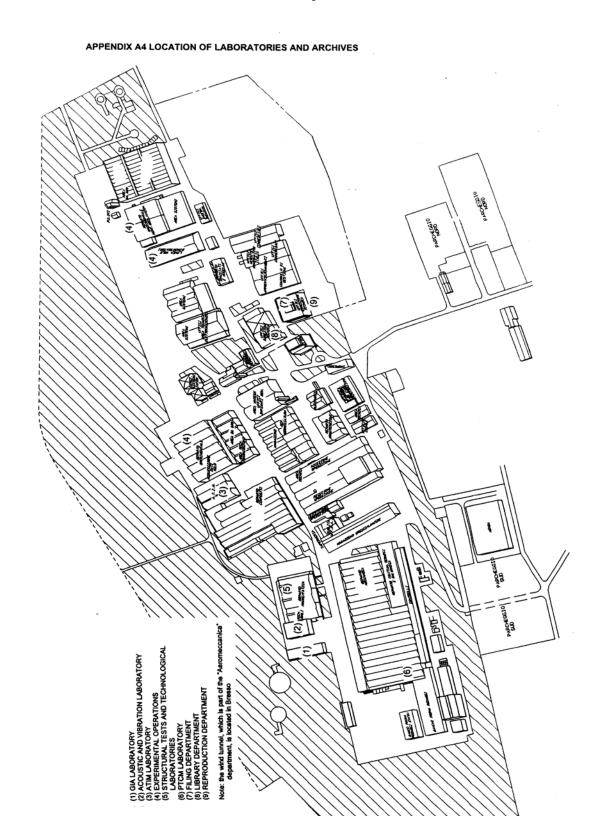
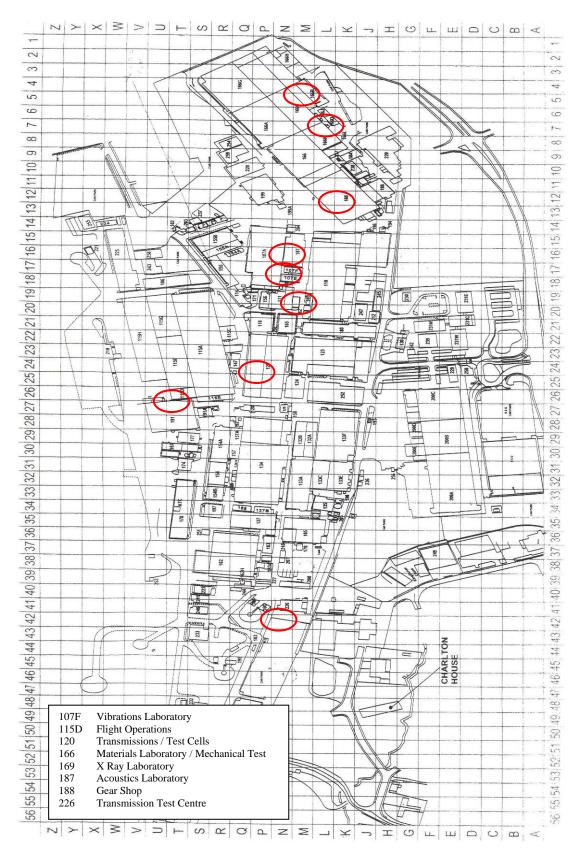
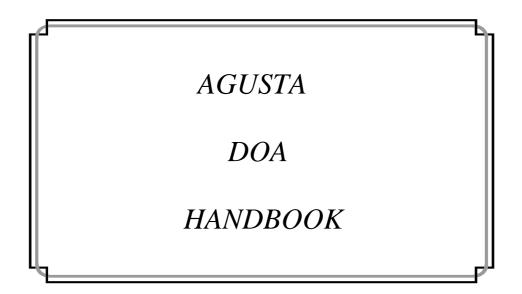
MODULE A
Course A1 The Airworthiness Authority and the main applicable rules
Course A2 EASA PART 21 – Level 1 (structure, responsibilities, privileges, limitations)
Course A3 Certification Process /Approval (DAS) – Synthetic presentation

MODULE B
Course A1 The Airworthiness Authority and the main applicable rules
Course A2 EASA PART 21 – Level 1 (structure, responsibilities, privileges, limitations)
Course B1 EASA PART 21 – Level 2 (detailed description of the Requirements and rules)
Course B2 Certification Process / Approval (DAS)

MODULE C
Course A1 The Airworthiness Authority and the main applicable rules
Course A2 EASA PART 21 – Level 1 (structure, responsibilities, privileges, limitations)
Course C1 DOA HANDBOOK (H002, tasks e responsibilities)

MODULE D
Interactive course to highlight updates and changes to regulations an procedures as applicable each year plus dedicated sessions on identified subjects.

APPENDIX 4

Location of laboratories and archives of Cascina Costa plant

Location of laboratories of Yeovil plant

TYPE INVESTIGATION PROCEDURE

DOC. N° C750-02-003.1

ISSUE H **DATE: February 28, 2011**

TABLE OF CONTENTS

ISSUE STATUS AND APPROVAL

ISSUE	DESCRIPTION	
A	First issue.	Prepared Date 1/12/00 Checked P. G. Colombo Date 1/12/00 Approved P.Alli Date 1/12/00
B	Updating of the procedures listed in the Reference paragraph and quoted in the text. Revision of the process of the RFM, ALS and MM to update the activity and the responsibilities.	Prepared IPQ Date 20/01/03 Checked P. G. Colombo Date 20/01/03 Approved P. Alli Date 20/01/03
C	Replacement of the references: • from ENAC and JAA to Authority • from JAR 21 to EC regulation 1702/2003 Part 21 Minor updating to improve readability	Prepared Airworth. Office Date 20/01/04 Checked P. G. Colombo Date 20/01/04 Approved P. Alli Date 20/01/04
D	Updating from compliance with EASA Part 21; in particular, introduction of: • the environmental protection concept • the concept of TC duration and continued validity • the concept of restricted type certificate • to account for the flexibility provided with respect to the Instruction for continued airworthiness. • The concept of import req. raised by any importing authority outside EU. Introduction of the flow-chart for the approval of documentary changes of RFM.	Prepared IPQ Date 06/09/04 Checked P. G. Colombo Date 06/09/04 Approved P. Alli Date 06/09/04

ISSUE STATUS AND APPROVAL

ISSUE	DESCRIPTION		
E	Detail updating to align the text with the remaining parts of the Handbook. Updating of appendix n. 7. Updating of appendix n°4, introduction of EASA Form 30 "Application of for TC / STC"	Prepared IPQ Tecnologie Checked G. Gino Approved G. Monti	Date 20.01.06 Date 20.01.06 Date 30.01.06
F	Change of the reference from 100-50-166 to IQ S015 (para 1.3.3). Introduction of the reference to EASA Form 30 "Application of for TC / RTC" available through EASA website. Make available the MAF through Panagon system (rif. AG-TEC219). Elimination of appendix 4 "fac-simile of EASA Form 30"	Prepared IPQ Tecnologie Checked G. Gino Approved G. Monti	Date 01/06/07 Date 03/06/07 Date 07/06/07
G	Updating the reference/name of quoted procedures. Updating the department denomination from Engineering Customer Support to Product Support Engineering	Prepared IPQ Tecnologie Checked G. Gino Approved G. Monti	Date 30/06/08 Date 30/06/08 Date 09/07/08
H	<u>Not significant changes.</u> • Updating the referenced procedures. • Updating to clarify the Instruction for Continued Airworthiness description and to introduce the reference to privilege provided by EASA part 21.A263(c)(3). *(Ref. Findings EASA R 10-012)*	Prepared M. Di Noia Checked G. Gino Approved F. Nannoni	Date 28/2/2011 Date 28/2/2011 Date 28/2/11

REFERENCES

EC Regulation n. 1702/2003 Part 21 “Certification of Aircraft and related products, parts and appliances, and of design and production organizations

C750-02-003.5 “Procedure for the equipment qualification”

AWEOP002 “Signing of technical documents”

100-50-134 “Definizione del programma di manutenzione degli elicotteri civili e della relativa manualistica”

100-50-140 “Bollettini tecnici preparazione ed approvazione”

100-50-148 “Gestione delle parti ‘classificate’”

100-50-157 “Inspections and tests in civil certification processes”

100-50-176 “Conformità alle norme di aeronavigabilità e programma di omologazione. Modalità di preparazione e gestione dei documenti relativi”

100-50-175 “CVE ed AE compiti, responsabilità, programma di omologazione modalità di preparazione e gestione dei documenti relativi”

AQ 09-13 “Validazione e rivalidazione del metodo produttivo. FAI”

IQ S015 “Qualification and Quality Assurance Requirements for Suppliers of Equipment during design and Development Phases”

PRO.FSE.026.96 “Procedura operativa per la conservazione e la distribuzione delle pubblicazioni tecniche”

PRO.FSE.052.02 “Procedura per la preparazione, la validazione e l’approvazione delle pubblicazioni tecniche”

SCOPE

The type investigation is defined as all the tasks necessary to show, verify and maintain compliance with the applicable requirements finalised to the grant of the Type Certificate for a product and restricted Type Certificate for aircraft.
The type investigation is a main part of the planned and systematic actions on which the Agusta Design Assurance System is based.
This Section of the DOA Handbook is intended to provide detailed procedures to be followed during the Type Investigation process.

APPLICABILITY

The procedures established in this Section are applicable to Type Certification processes for which Agusta is applicant.
In the past, under JAA procedures, the type certification procedures varied depending on the competence of the Italian Aviation Authority rather than the Joint Aviation Authority.
Now the Type Certificate is granted by European Aviation Safety Agency (EASA).
Under the auspices of EASA, it is understood that the JAA certification and validation procedures still apply having impact only on the Authority team composition; for the remaining aspects, the procedure apply for all Type Investigation processes.
Type Investigation processes that have been conducted prior to the EASA entry into force, followed the previous revision of the DOA Handbook.
Aviation products are global products and need to be marketed both inside and outside EU.
In order to accomplish the latter case, a Type Certificate typically need to be granted by the competent Authority of each interested country outside EU.
Given that the principles of the Type Investigation Process are world wide accepted, specific procedures may be applicable depending on the relationship of the involved countries and import requirements may be raised by the importing Authorities.
These situations are managed on a case by case basis by the Office of Airworthiness in the way and time scale appropriate to the marketing needs.

DEFINITIONS

Applicant
In this procedure means a "Person" applying for a Type Certificate.

Authority
In this procedure is a generic term used to identify the Aviation Authorities that are competent to carry out the type investigation process and to grant the type certificate. It encompasses, as applicable, ENAC, JAA, EASA, etc.

Certification basis
The airworthiness requirements that have to be complied with for the issue of a Type Certificate, See Part 21.17.

Certification Specification
Technical standards issued by EASA to be considered for the definition of the product certification basis (e.g. for helicopters CS 27; CS 29; etc.).

Comply; Compliance
Are used in connection with meeting a rule, regulation or requirement.

Conform; Conformity
Are used in connection with showing or finding that a product, part or appliance is in accordance with given design data.

Environmental Protection Requirement
The noise and emission requirements that have to be complied for the issue of a Type Certificate. See part 21A.18

Continued Airworthiness
Means analysis of the data coming from experience and decision of mandatory corrective action if required.

European Aviation Safety Agency
The European Agency instituted by European Commission Regulation n. 1592/2002.

Equivalent Safety Item
Any airworthiness provisions not complied with, which are compensated for by factors that provide an equivalent level of safety.

Exemption
Means formal acceptance of non compliance with a specific requirement by the Authority.

Joint Aviation Authorities (JAA)
Means all the Authorities that have signed the JAA Arrangements Document of 11 September 1990, each of them acting in accordance with joint procedures [JAR 21.2(a)].

Local NAA
Means the NAA of the country where the DOA applicant/holder is a legal entity.

National Aviation Authority (NAA)
Means any of those Aviation Authorities which have signed the Arrangements Document concerning the development, acceptance and implementation of JAR.

Parts and Appliances
Means any instrument mechanism, equipment, part, apparatus, appurtenance or accessory, including communications equipment, that is used or intended to be used in operating or controlling an aircraft in flight and is installed in or attached to the aircraft.
It includes parts of an airframe, engine or propeller.

Product
Means an aircraft, aircraft engine or propeller.

Special Condition
The airworthiness requirements, established in addition to those already contained in the relevant Certification Specification (CS), that are necessary to provide an adequate safety standard for the product.

Surveyor
Means the personnel of the local NAA responsible for the continued surveillance.

Type Certificate (TC) – Restricted Type Certificate
The type design, the operating limitation, the type-certificate data sheet for airworthiness and emissions, the applicable type-certification basis and environmental protection requirements with which the Agency record compliance, and any other conditions or limitations prescribed for the product. The type-certificate data sheet for noise.

Type Certificate Holder (TCH)
Means a “Person” responsible for the relevant “Type Design” and applying for, and then holding, the Type Certificate and accepting the responsibilities for the whole product.

Type Design
Means the bulk of design data necessary to identify the product for which compliance with the Type Certification Basis is demonstrated. The constitution of the type design is defined in 21A.31.

ACRONYMS

AERON	Office of Airworthiness
AE	Airworthiness Engineer
AI	Action Item
AIL	Action Item List
ALS	Airworthiness Limitation Section
ASI	Helicopter Integrated System Architecture
ATIM	Airframe Systems D&D
ATR	Rotor Systems D&D
TA	Technical Area
ATT	Transmission Systems D&D
BOE	Bought Out Equipment
CAI	Certification Action Item
CofA	Certificate of Airworthiness
CCL	Compliance Check List
CMR	Certificate Maintenance Requirement
CPE	Chief Project Engineer
CRI	Certification Review Item
CS	Certification Specification
CVE	Compliance Verification Engineer
DDP	Declaration of Designed and Performance
DT	Technical Direction
EASA	European Aviation Safety Agency
FAT	Fatigue
GIA	Electrical and Avionic Systems D&D
H/	Head of /
HDO	Head of Design Organisation
MM	Maintenance Manual
MOC	Means of Compliance
MRB	Maintenance Review Board
OP SPE	Experimental Operations and Flight Test
PBE	Helicopter System Design
PCM	Authority Project Certification Manager
PID	Project Information Document
QUA SPE	Experimental Quality Assurance
RAM	System Reliability and Safety
RFM	Rotorcraft Flight Manual
SCD	Source Control Drawings
TC	Type Certificate
TCB	Type Certification Basis

TCBM	Type Certification Board Meeting
TCDS	Type Certificate Data Sheet
TCH	Type Certificate Holder
TIP	Type Investigation Program
TPS	Structural Technologies and Tests
VIL	Vendor Item List

1 THE PROCEDURES

1.1 Basic Procedures

This section contains basic procedures on:

- Documentation
- Certification Review Item (CRI)
- Certification Actions Items (CAI)
- Meetings
- Resolution of conflicts

1.1.1 Documentation

Documentation for Type Certification includes all documents necessary for the demonstration of compliance with the applicable airworthiness and environmental protection requirements.
They are identified via a Compliance Check List and managed through the Type Investigation Program .

NOTE: at the initiation of Type Certification process AERON and Authority PCM will agree the list of distribution of documents and all necessary information, which will be included in the Project Information Document issued by Authority PCM.

(a) **Documents requiring formal approval by the Authority**

(a)(1) Rotorcraft Flight Manual (RFM)
(See Manual Approval Flow Chart in Appendix 1)

A Rotorcraft Flight Manual is normally prepared for each helicopter type or variant in accordance with the applicable airworthiness and environmental protection requirements and taking into account the relevant advisory material.
Tasks and responsibilities for the RFM preparation and approval, are here by provided.

FTE:

- Gather data aimed at defining A/C limitations and procedures provided both by flight test activity and by other interested DO functions during the type investigations.

- Prepare a draft of the RFM for portions of their competence (see the first bullet point) in coordination with the designated Project Test Pilot.
- Submit their contribution to the CPE function.

Pertinent DO functions

- Provide their contribution to the CPE for the portion of the RFM of their competence; typically: Manufacturers Data, Weight and Balance, System Descriptions, Handling, Servicing & Maintenance, Noise.

CPE function (usually the appointed Project Engineer)

- Based on the contribution of both FTE and all the concerned DO functions, the PE prepare, in cooperation with "Product Support Engineering", the finalised draft of the RFM.
- Get from AERON the numbered Manual Approval Form (MAF), fill the first part and sign it for the general issues. Submit to FTE for review the finalised draft of RFM. The MAF is made available through the PANAGON system in the ≺Classe Documento "Moduli DT"➢, file AG-TEC219.

FTE:

- Check the finalised draft of the RFM and sign the MAF for flight issues.
- Discuss the finalised draft of the RFM with the designated Project Test Pilot and get related signature on the MAF.
- Submit the final draft to "CVE Flight".

CVE:

- Verify the final draft of the RFM and sign the MAF. See 100-50-175 for details of the CVE involvement.
- Submit the package to AERON.

CPE:

- Sign the MAF and approves the RFM for the Company.

AERON

- The appointed AE coordinates, as appropriate, the Company verification, approval and signs the MAF.
- Submit the package to Authority team.
- Coordinate discussions with Authority up to Authority approval of RFM.

  Note: Authority comments leading to the draft RFM update, need to be resubmitted to interested persons through revision of the package (RFM and MAF). Under those circumstances, the AE will take care of correspondence between the MAF and the enclosed master RFM.
- Add Authority approval references to the MAF and submit the package to the Data Management Office for record keeping and to the Technical Publication Department (Product Support Engineering) for printing and distribution.

TECHNICAL PUBLICATION Department
(Product Support Engineering)

- Cooperate with the FTE and CPE in the preparation of the RFM.
- Print and distribute the approved RFM to the persons/organisations concerned. (see report PRO.FSE.052.02 and PRO-FSE.026.96)

(a)(2) Airworthiness Limitations Section of the Maintenance Manual (ALS)

Based on the fatigue evaluation of the helicopter structures, replacement times, mandatory inspections and/or CMRs will be established and reported in the Airworthiness Limitation Section of the Maintenance Manual (Chapter 4). See document 100-50-134 for ALS preparation and follow the process described in 1.1.1(a)(1) and appendix 1 for the Company approval of the Maintenance Manual Chapter 4.
AERON, after signing the MAF for check and release, submit the package to Authority and coordinate discussions with them up to their approval of ALS.

Note: Authority comments leading to the draft ALS update, need to be resubmitted to interested persons through revision of the package (ALS and MAF). Under those circumstances, the AE will take care of correspondence between the MAF and the enclosed master ALS.

- The AERON add Authority approval references to the MAF and submit the package to the Data Management Office for record keeping and to the Technical Publication Department (Product Support Engineering) for printing and distribution (see report PRO.FSE.052.02 and PRO-FSE.026.96).

See Report 100-50-175 for details of the CVE and AE involvement.

(b) **Instructions for Continued Airworthiness**

(b)(1) Maintenance Manual (MM)

The Maintenance Manual is produced in accordance with the applicable Airworthiness rules. The content of this Manual includes:

- Descriptive data of the helicopter and its systems.
- Servicing information.
- Maintenance Requirements (Chapter 5) containing:
  - Inspection Program
  - Overhaul periods
- Airworthiness Limitation Section (See under (a)(2)).
- Accomplishment instructions, i.e. detailed procedure for accomplishment of maintenance instructions (parts replacement, inspections etc.).
- Etc.

See document 100-50-134 for Maintenance Manual preparation and validation requirements.

- Follow the process described in 1.1.1(a)(1) and Appendix 1 for the Company approval of the Maintenance Manual Chapter 5. AA approval is not required. AERON, after signing the MAF, submit the package to the Data Management Office for record keeping and to the Technical Publication Department (Product Support Engineering) for printing and distribution (see report PRO.FSE.052.02 and PRO-FSE.026.96).

Note: when the AERON sign the MAF will take care of the correspondence between the MAF and the enclosed master MM chapter 5.

See report 100-50-175 for details of the CVE and AE involvement.

(b)(2) Service Bulletins are prepared and validated in accordance with document 100-50-140.

In accordance with EASA Part 21.263(c)(3) a DOA holder may issue information or instructions related to approved changes to Type Design, containing the statement "The technical content of this document is approved under the authority of DOA nr. EASA.21J.005", without prior verification by the Agency.

NOTE: The actual grant of this privilege has to be verified in the Terms of approval of the Design Organization Approval Certificate.

The approval of technical content means that:

- the design data has been appropriately approved ; and
- the instructions provide for practical and well defined installation/inspection methods, and, when accomplished, the product is in conformity with the approved design data.

(ref. GM 21A.263(c)(3)).

The Instructions for continued airworthiness should be available to operators upon the aircraft delivery or upon issue of the first certificate of airworthiness for the affected aircraft. The availability of some manual or portion of the instructions for continued airworthiness, dealing with overhaul or other forms of general maintenance, may be delayed until after the product has entered into service, but shall be available before any of the products reaches the relevant age or flight-hours/cycles.

(c) **Compliance reports**

Compliance Reports are documents used to show compliance with the airworthiness and environmental protection requirements and as such referenced in the Compliance Check List and in the Type Investigation Program.

It is here worth to mention some DAS peculiar aspects:

- All compliance reports have to have a standard section titled "Compliance Assessment" in which the airworthiness requirements that are to be complied with in total or in part by the report are declared.
- All compliance reports have to have a standard section titled "Certification Program / applicability" in which the applicable CCL document and the helicopter model are declared.
- All the compliance reports have to be signed by the relevant CVE and AE (See reports AWEOP002).
- When the compliance reports are related to tests, they have to provide enough information on the test article with reference to the configuration being certified (See report 100-50-157).

(d) **Procurement Specification**

For the Procurement Specification the paragraph “Applicable Airworthiness and environmental protection Rules" and the CVE/AERON signature have to be provided.
See C750-02-003.5 and 100-50-176 for details.

(e) **Declaration of Design and Performance** (DDP)

See C750-02-003.5

(f) **Drawings**

Drawings can be referenced in the CCL when the requirements address specific design aspects related to materials, manufacturing process, protection of structures etc. The drawing itself is not signed neither by the CVE nor by the AE (See reports AWEOP002).
In order to provide evidence of the compliance and the related verification, a compliance statement is produced in accordance with 100-50-176.

(g) **Certification Maintenance Requirement (CMR**)

CMRs identify inspections and all other maintenance tasks that are required to avoid failure conditions which could jeopardise safety of flight. RAM is responsible to identify the CMRs with the support of the relevant design and development functions. See 100-50-134 for the definition and management of the CMR.

(h) **Type Design Definition Document**

The type design shall be defined as a minimum by the following documents:

- The helicopter general Assembly drawing listing those drawings and specification necessary to define the configuration shown to comply with the applicable type-certification basis and environmental protection requirements.

- All specifications concerning material and processes as quoted in the drawing called by the General Assy Drawing.
- List of Critical Parts and their production Sites / Production configuration Report.
- Airworthiness limitation as defined in the Maintenance Manual (Chapter 4).

Each Type Design shall be identified and described by a specific Report.

1.1.2 Certification Review Item (CRI)

The CRI system is a basic tool to follow up discussion and resolution of critical items as defined below. A CRI is raised by the PCM upon proposal of an Authority TEAM Specialist or an Agusta Airworthiness Engineer in the following cases:

(a) To record the process followed to define the content of the applicable Type Certification Basis and environmental protection requirements
(b) To develop and administer Special Conditions
(c) To record and detail Exemptions
(d) To record and detail equivalent safety findings
(e) To record discussion on unusual interpretations or means of compliance
(f) To record discussion and resolution of controversial items
(g) To define the Type Design

Refer to Appendix 2 of this procedure for CRI flow chart and format.

1.1.3 Certification Action Items (CAI)

For any open item and for subjects where a CRI is not justified but requiring special attention by AGUSTA or by Authority a Certification Action Item will be raised by an Authority team specialist as a means to record the necessary actions and the basis for their closure.

A CAI shall be opened at least in the following cases:

- To review the suitability of compliance demonstrations of selected subjects
- To follow up a closed CRI, when necessary
- To administer matters interfacing certification and operation.

The various Action Items will be recorded in the Action Item List, managed by the Office of Airworthiness in coordination with the Authority PCM.
(See Appendix. 3 for CAI flow chart and format).

1.1.4 Meetings

(a) **Authority familiarization with the project**
See para 1.2.

(b) **Type Certification Board Meeting (TCBM)**

Objectives:

- To consolidate agreement on items of primary importance, like type certification basis, Means of Compliance, Type Investigation Program.
- To verify progress of the TIP at fundamental milestones and to keep it up to date.
- To resolve critical open items.
- To provide high level information to all involved parties.

Participants:

- Authority: Directors (as necessary) PCM and Specialists (as necessary).
- AGUSTA: HDO, CPE, H/AERON, appointed AE, CVEs (as necessary), Specialists (as necessary).

Organisation: Date and Agenda proposed by AERON in coordination with Authority PCM.

Facilities: Meeting room normally supplied by Agusta.

Chairman: Authority.

Secretary: Agusta, H/AERON or AE.

Minutes: A summary of key points and conclusions reached is prepared by the Secretary and agreed possibly at the end of the TCBM.
Draft of the Minutes transmitted by AERON; comments to be provided by all parties within and final version of the Minutes circulated as soon as possible after the TCBM.

(c) **Specialists Meetings**:

Specialist Meetings between Agusta and Authority will be held at dates scheduled by the detailed TIP or at any other date as dictated by peculiar circumstances.

Objectives:

- Verify progress and present delays.
- To discuss and resolve major technical problems.
- To prepare technical basis for taking decisions.
- To identify interface problems.
- To identify controversial items.
- To define action items as necessary.

Participants:

- Authority Team members (and PCM if appropriate).
- AGUSTA CVEs.
- AGUSTA Specialists as necessary.
- AGUSTA AE.

Organisation: objectives and agenda shall be agreed between the interested parties under coordination of AERON.

Minutes: the minutes should be, whenever possible, prepared by the end of the meeting; a draft of the minutes should be any way transmitted by AERON for review, comments and agreement.
Distribution of the agreed minutes shall be done as soon as possible after the meeting.

(d) **Interface panels**:

For items which require evaluation and discussion by specialists of different disciplines, ad hoc meetings will be held as follows:

Objectives: To review and discuss all interface aspects of the subject with all interested specialists and define action items as necessary.

Participants:

- Authority Specialists from the involved disciplines.
- Authority PCM.
- AGUSTA AE.
- AGUSTA CVEs from the involved disciplines and specialists as necessary.

Organisation: AGUSTA AERON will prepare the panel in coordination with Authority PCM.

Minutes: Same criteria as for Specialist meetings.

1.1.5 Resolution of conflicts

The following case of conflicts are considered:

- Conflicts between Agusta Team Specialists
- Conflicts arising from CVEs decisions
- Conflicts between Agusta and Authority Team

(a) **Conflicts between Agusta Team Specialists**

Different position may arise between Agusta Specialists when dealing with interface problems between different disciplines.

- At first the interested Specialists shall perform every effort to reach an agreed solution to the problem under discussion
- If an agreement cannot be reached between the specialists the problem will be brought to the attention of the team leader (Airworthiness Engineer) who will involve the interested Chief Design ("Capo Progetto") and CVE and all will try to define the solution.
- If an agreement has not been reached the AE will call for ad-hoc meeting involving:
  - The interested Heads of Departments
  - The interested CVEs
  - The Head of the Office of Airworthiness
  - The CPE
- In exceptional cases where an agreement has not been reached at lower level the CPE will bring the problem to the HDO who is responsible to take a decision.

Positions and decisions taken at any of the above level of discussion shall be recorded in minutes prepared by AE upon agreement and signature of the involved parties.
When the decision is taken by the HDO this will be communicated in writing to the AE and copied to all interested parties.

(b) **Conflicts arising from CVEs decisions**

(1) When a CVE is not satisfied with a Compliance Report (or any other document implying his signature) he will report in writing his position and relevant requests of corrections to the Chief Design who has signed the Report, copying the report to the H/AERON and the CPE.

(2) If the Chief Design and/or the CPE do not agree with the requests of the CVE, the H/AERON will arrange a meeting to discuss the problem and try to reach an agreed decision.
Attendants to the meeting will be at least:
- Chief Design
- CVE
- H/AERON
- CPE

Decisions and positions expressed during the meeting will be recorded in the minutes prepared by H/AERON.

(3) If an agreement has not been reached the problem shall be raised to the level of HDO who is responsible to take a final decision.

(4) If the CVE does not agree with the decision taken by HDO, he shall ask the H/AERON to involve Authority in order to obtain to a solution of the issue.

(c) **<u>Conflicts between Agusta and Authority Team</u>**

Controversial position may arise during discussions and meeting between Agusta and Authority Specialists.

(1) When an agreement is not reached between the specialists, the Agusta Team leader (AE) and Authority PCM, informed through the relevant minutes, will coordinate and support further discussions and evaluations with the interested specialists, trying to reach a decision agreed by both Agusta and Authority.

(2) When a controversial position remains between Agusta and the Authority, the AE will take the necessary actions to escalate the issue within the company and the Authority organisations.
In this case the CRI form will be used.

1.2 <u>Initiation of Type Investigation Process</u>

This initiation phase of the process includes:

- <u>Application</u>
  Application will be sent to EASA, by the Office of Airworthiness, through EASA Form 30, signed by the HDO. (EASA Form 30 is available in the EASA website).
- <u>Acceptance of the application</u>
  Application will be considered accepted in principle by the Agency, unless objections are formally expressed within one month upon receipt of the Application.
- <u>Authority familiarisation with the project</u>
  As soon as Authority PCM has been appointed the Office of Airworthiness will organise a initial briefing to familiarise him/her with the project.
  The office of Airworthiness will receive from the Agency communication about their participation to this familiarisation phase.

  Note: The familiarisation will be more effective if the office of Airworthiness will be able to make available advance information on Technical issues of the project highlighting unusual/novel design features, if any, and a proposal of the Type Certification Basis. H/AERON will ensure preparation and circulation of the minutes.

  CPE shall provide evidence of any novel design.

- <u>Agusta Team</u>
  An Agusta Team, comprehensive of enough specialists and CVE to cover all disciplines/items involved by the project, is set up to conduct the Type investigation process.
  The Agusta Team is led by an appointed AE who is the routine interface of the Authority PCM.

  With due consideration for the Agusta Organisation, Agusta and the Authority Teams are intended to allow as much as possible one to one specialist interface.

Communication on the Agusta Team is given by AERON to the Authority PCM.
The Agusta team leader is responsible to provide to the Agusta team the appropriate information on the applicable procedures.
See 100-50-175 for details on the functions and responsibilities of the AE, the CVEs, the specialists.
See also 100-50-176 for the team composition, tasks and responsibilities.

1.3 Management of the Type Investigation process

The Type Investigation process comprises four major phases:

- The definition of and the agreement on the Type Certification Basis and on the applicable Environmental Protection Requirements.
- The definition of and the agreement on the Means of Compliance.
- The demonstration and verification of compliance.
- The final phase.

1.3.1 Phase 1 - Definition and agreement of the Type Certification Basis (T.C.B.) and of the applicable Environmental Protection Requirements

The Type Certification Basis of a new type of aircraft is established in accordance with Part 21.17 and taking into account the existing Guidance Material.

The date of application for the type certificate will be taken as reference date for determining the status of the regulations to be considered for the definition of the certification basis.
The applicable Environmental Protection Requirements of a new type of aircraft is established in accordance with Part 21.18 and taking into account the Guidance Material or Certification Specification that will be issued by the Agency.
Specific import requirements of countries outside EU may need to be considered. In such case, they are dealt with in the way and with the timescale appropriate to the specific case. See also the “Applicability” paragraph.
In case of contradiction between the certification basis and the import requirements, the applicant and the Agency will agree the way forward on a case by case basis.

CRI A-1 is used to process Type Certification Basis.

The Type Certification Basis is the sum of:

- Certification Specifications issued at the date of application.
- Special conditions if any.
  Note: New interpretations or Means of Compliance as required by Authority or agreed between the Applicant and the Authority should also be referred to in CRI A-1.
- “Elect to comply" airworthiness standards. Agusta may have an interest in adopting later effective amendments; in such a case these amendments will be treated as if they are mandatory standards. Nevertheless, any time before TC issuance, Agusta may renegotiate with Authority the standards adopted on an "elect to comply" basis.

The Type Certification Basis should be developed and fixed as early as possible.
All discussions and negotiation with Authority will be managed by AERON in coordination with the Agusta Team, the Agusta CVEs and the relevant CPE; this will include:

- An initial meeting with Authority PCM to jointly draft and to open CRI A-1
- Briefings to Authority specialists as necessary for an acceptable understanding of the design and to identify any peculiar design feature susceptible of Special Condition or to be processed in a CRI.

After completion of its internal review and comment process, Authority will state its official position on the T.C.B.

In this phase the Authority PCM also prepares, in coordination with the Agusta AE the relevant Project Information Document.

AERON, in coordination with Authority PCM will organise:

An INITIAL TYPE CERTIFICATION BOARD MEETING (TCBM) to deal with:
- Presentation of Agusta Team
- Familiarisation with the project (Authority comments, discussion)
- Initial list of CRIs
- Discussion and agreement of Type Certification Basis (CRI A-1)
- Discussion and agreement of applicable Environmental Protection Requirement
- An Overview Certification Plan (milestones)
- Presentation by the Manufacturer of VIL and manufacturing share
- Discussion and agreement on related procedures (PID)

See Flow Chart at Appendix 8.

1.3.2 Phase 2 - Definition of Means of Compliance (MOC) and Type Investigation Programme (TIP)

To enable the certification process to be managed in a systematic and timely manner Agusta will prepare a Type Investigation Programme such as to identify for each significant subject the means used for demonstration of compliance and the time schedule for achieving compliance.
This activity will be performed through the following steps:

(a) **Definition of MOC**

The means of compliance for each requirement need to be defined and agreed with the AA in sufficient detail to ensure good mutual understanding.

To this purpose AERON, in coordination with the Agusta Team and the relevant CPE and with the support of CVE's, will manage the process of definition and subsequent discussion of:

- MOC adopted for each requirement using the codes given in Appendix 4 (or equivalent codes as appropriate to the programme).
- Tasks to be performed in terms of:
  - calculation/analysis
  - flight test program
  - structural test program
  - transmission tests
  - systems tests
  - design/safety assessment
  - function/reliability tests
  - equipment qualification
- The resulting certification documents to be issued.
- Time schedule for each activity and for delivering to the AA of the certification documents.

From the data and information collected in this activity the following working documents will be prepared and given both to the Authority and the Agusta Teams.

- <u>Compliance Check List</u> (at preliminary stage)

This document will be assembled using the format given in Appendix 5. See also 100-50-176 for details.
The main purpose of this document are:

- To record, split at the same detail of the Airworthiness Regulations, , the Certification Basis (including the Environmental Protection Requirements), as agreed in the Phase 1.
- To identify, at code level, the MOC.
- To identify, for each requirement, the certification documents which will contain demonstration of compliance.
- The CCL are prepared by the Agusta team, under coordination of the Office of Airworthiness based on a defined work sharing among the involved disciplines.
- The CCL are issued as a technical document in accordance with report 100-50-176; in particular, the CCL are accepted by the CVE, approved within the company by the CPE and released to the Authority by AERON.

- <u>Certification program</u>

  This document will list all documents referenced in the CCL, organised by discipline taking into account the Authority and Agusta Teams Composition.
  For each document the list of airworthiness and environmental protection requirements addressed by the document will be reported.

  The Certification documents are classified to identify the level of the Authority involvement. See Appendix 7.

Sufficient information is provided for the most significant activities to enable the Authority making their determinations on the TIP.

- Piano Operativo (Program Schedule)
  This document is based on the data gathered during the process outlined above.
  For each discipline:
  - The most significant testing activity is identified; relevant time schedule is addressed; time schedule for preparation and delivery to Authority of each single document will also be provided.
  - Documents needed to show compliance are listed by number and title.

  The AE and the CPE office work in close contact to keep under control the evolution of the investigation program. See also 100-50-176.

(b) **Review process by the Authority**

Upon receive of the above mentioned documents the Authority Team Specialists will review and comment the Type Investigation Programme and the MOC proposed by Agusta.
The Authority PCM will also inform Agusta on their plan to participate to inspections and tests (See 100-50-157).
Interpretation and MOC implying new policies and any other issue related to the MOC will be identified and relevant CRI's raised and submitted to Agusta through PCM
At the conclusion of the Authority review process the Phase 2 will be concluded in the

2nd TYPE CERTIFICATION BOARD MEETING intended at reaching agreement on: - MOC - CRIs - Detailed plan of certification activity - VIL and procedure for equipment qualification - Classification of Documents - Authority participation to inspections and tests - Costs related to Type Certification

See Flow Chart at Appendix 8

1.3.3 Phase 3 - Demonstration of Compliance

- Once Type Certification Basis and the applicable Environmental Protection Requirements have been established and the TIP agreed with the Authority, the phase of compliance demonstration is initiated, which includes:
  - Analysis / safety assessment
  - Inspection and tests
  - Equipment qualification
  - Fabrication methods qualification (as appropriate)
  - Issuance of Compliance reports
  - Drafting Rotorcraft Flight Manual
  - Calling of Specialist Meetings and Interface Panels
  - Definition of Type Design

    Note: Design evaluation during TIP shall be monitored and the design change evaluated for their impact on earlier compliance activities.

- Inspection and tests
  - Each of ground and flight test provided in the TIP is conducted in accordance with the requirements defined in the relevant Test Proposal Report.
    Flight tests will encompass enough evidence to provide reasonable assurance that the aircraft, its parts and appliances are reliable and function properly.
  - Allowance is given to the Authority to carry out inspections and participate to ground and flight test at the extent they judges appropriate for their verification function and for checking the validity of the Declaration of compliance issued by the HDO. (See Report 100-50-157)

- Qualification of critical parts is conducted in accordance with, AQ 09-13, 100-50-148, IQ S015.

- Management
  The office of Airworthiness in coordination with the Authority PCM manages timely and efficient progress of the demonstration of compliance by means of the following tools:
  - Action Item List
  - List of Certification document complemented by their status (delivered, discussed, accepted,..)
  - Equipment qualification schedule
  - Program schedule

- The Agusta team, coordinated by the Office of Airworthiness progressively update the content of the CCL following agreements reached on the MOC.

- At appropriate stages of the program (e.g. before the first flight, at conclusion of significant structural tests, before starting the certification flight test program) the Office of Airworthiness, in coordination with the Authority PCM, will arrange:

TYPE CERTIFICATION PROGRESS MEETINGS
To cover:
- General Situation of the Certification Programme
- Technical Issues
- Review of CRI's
- Review of the CCL
- Review of VIL and equipment qualification
- Updating of Type Design
- Cost Review

See Flow Chart at Appendix 8.

1.3.4 <u>The Final Phase</u>

The final phase comprise the last 2-3 months before TC, when most of compliance demonstration activity is completed.
An accurate schedule of the final tasks is prepared by the Office Airworthiness in coordination with the CPE and the Authority PCM.

The following are typically the activities to be performed during this phase:

- Possible updating in Type Design are defined and justified.
- Authority Flight test program is defined and carried out.
- Final draft of the Flight Manual and ALS are submitted to Authority and reviewed by the Authority responsible specialists.
- A draft of the Type Certificate Data Sheet is prepared by the office of Airworthiness and submitted to the Authority.
- The applicable certification basis will be stated in the “Type Certification Data Sheet” (TCDS). This will include Special Conditions, Equivalent Safety Findings and Exemptions.
  If the TCDS differentiates between "mandatory" and "elect to comply" standards a note shall be included to make clear that both are applicable to the current Type Design and to any future change to the Type Design.
- The Action Item List is reviewed and closed.
- All documents listed in the CRI-04 "Documentation/ Information required for T.C." are supplied to the Authority.
- The final CCL incorporating the Declaration of Compliance is closed and signed.
- The HDO issues the Declaration of Compliance to the certification basis and to the applicable environmental protection requirements (See appendix 6).

- The Authority PCM prepares the Final Report and sign the Authority Statement of Compliance.
- Based on the schedule of activities post TC Items may be proposed to Authority and properly justified in accordance with criteria defined in the PID.

The Office of Airworthiness, in coordination with Authority PCM organise:

FINAL TYPE CERTIFICATION BOARD MEETING in order to ratify:
- Closure of Action Items
- Completion of CRIs
- Approval of CCL
- Endorsement of the Applicant Declaration of Compliance
- Results of the Authority Flight test
- Approval of the V.I.L.
- Approval of AFM and ALS
- Identification of CMRs
- Identification of Type Design
- Definition of Post TC Items
- Draft of TCDS
- Final Report of PCM

The above TCBM shall be planned, normally, 1 month before the date, proposed by Agusta as target for issuance of the T.C.

After completion of final actions, eventually identified during the above meeting, Authority will issue the Type Certificate and formally approve the Flight Manual and the Airworthiness Limitation Section of the Maintenance Manual.
See Flow Chart at Appendix 8.

1.3.5 Restricted Type Certificate

In case of an aircraft does not meet the compliance with the requirements of Part 21.A21(c), Agusta shall be entitled to have a Restricted Type Certificate issued by the Authority.

To this purpose, an appropriate type certification basis, that ensure adequate safety with regard to the intended use of the aircraft, shall be defined and agreed with the Authority PsCM (see para 1.3.1 for the process and the relevant responsibilities).

Note: the engine installed on the aircraft shall have a TC issued or determined in accordance with Part 21, or have been shown to be in compliance with the requirements that ensure safe flight of the aircraft.

1.4 Type Certificate validity

A Type Certificate and Restricted Type Certificate have an unlimited duration.
The validity is subject to:

- Agusta, as the TC holder remain in compliance with the requirements of Part 21.
- The certificate is surrendered or revoked.

2 THE RESPONSIBILITIES

TASK	Primary Responsibility	Support	Coordination (•)
Documentation:			
• Flight Manual	See Section 1.1.1.(a)		
• ALS	CPE	TAs as applicable	-
• CMR definition	RAM	TAs as applicable	-
• CMR approval	CPE	TAs as applicable	-
• Maintenance Manual	See Section 1.1.1.(b)	TAs as applicable	-
•Signature on Compl. Reports	See Reports AWEOP002	-	-
• Procurement Specification	See Section n° 3.5	-	
• D.D.P.	See Section n° 3.5	-	-
Certification Review Items (CRI)	CPE	AG Team Spec., CVE	AERON
Action Record / CAI	Team Leader	Team Specialists	AERON
Organization of TCBM	AERON	-	-
Organization of Spec. Meetings	Team Spec.	-	AERON
Organization of Interface Panels	AERON	-	-
Issue of Technical Description	CPE	TAs as applicable	-

TASK	Primary Responsibility	Support	Coordination (•)
PHASE 1 **Definition of TCB**			
• Proposal of TCB/ Discussion with Authority	AERON	CPE, Team Leader, Team Spec.	-
• Overview Certi-fication Plan	AERON	CPE	-
• Presentation of VIL	See Section 3.5	-	-
PHASE 2 **Definition of MOC**			
• Preparation of CCL at program stage	AERON	CPE/Agusta Team	-
• Approval of CCL	CPE	-	-
• Piano Operativo	AERON	CPE	-
• List of Cert Documents (LCD)	AERON	-	-
PHASE 3 **Demonstration of Compliance**			
• Control of TIP progress	AERON	-	-
• Issue of Ana-lysis Reports	TAs	-	-
• Issue of Test Proposal	TAs	-	-

TASK	**Primary Responsibility**	**Support**	**Coordination (•)**
• Flight Tests (Incl.Load Survey)	FTE	TAs for Flight tests on Systems	-
• Static Tests	TPS	-	-
• Fatigue Tests	TPS	-	H/TPS
• Type Test (CS 27/29-923)	ATT, ATR, PBE	FTE	CPE
• Structural Tests on Transmission	ATT	MECC., TPS	-
• Tests on Rota-ting Flight Controls	ATR	-	-
• Bench Tests on Mech. System	ATIM	-	-
• Landig Gear Tests	PR/BRIN	-	H/BRIN
• Ground Resonance Tests	DIN	FTE	-
• HIRF Tests	SA/GIA	-	H/GIA
• Lightning Tests	SA/GIA	-	H/GIA
• E.M.C. Tests	SA/GIA	-	H/GIA
• EFIS	SA/ASI	-	-

TASK	Primary Responsibility	Support	Coordination (•)
• Safety Assessment	RAM	-	-
• Design assessment of rotors and transmissions	RAM	-	-
• Conformity on Tests Specimen	QUA/CONTR.	-	-
• Inspections on Test Rigs	TEST LABOR.	-	-
• Equipment Qualification	See Section 3.5	-	-
• Certification of Prototypes	CPE	TAs	AERON
• Control of Configuration	CPE	TAs	-
• Critical Parts Techn.Qual.	QUA	TAs	-
FINAL PHASE: • Organisation of Authority Flight Tests	FTE	-	-
• Closure of CCL	CPE	Team Leader, Team Sp., CVE	H/AERON
• Closure of Action Item List	AERON	Team Leader / Team Spec.	-
• Approval of VIL	See Section 3.5	-	-

TASK	Primary Responsibility	Support	Coordination (•)
• CMR Report	CPE	Team Leader / Team Spec./CVEs	-
• Final Draft of RFM	FTE	-	-
• Final Draft of ALS	CPE	TAs as applicable	-
• Delivery to Authority of Documents under CRI-A4	AERON	TA, Responsible for issue of Docs.	-
• Freezing of Type Design	CPE	TAs	-
• Identification of Post TC Items	AERON	-	-
• Draft of TCDS	AERON	-	-

(•) Coordination is the charge of the person having the primary responsibility of the task, unless otherwise specified.

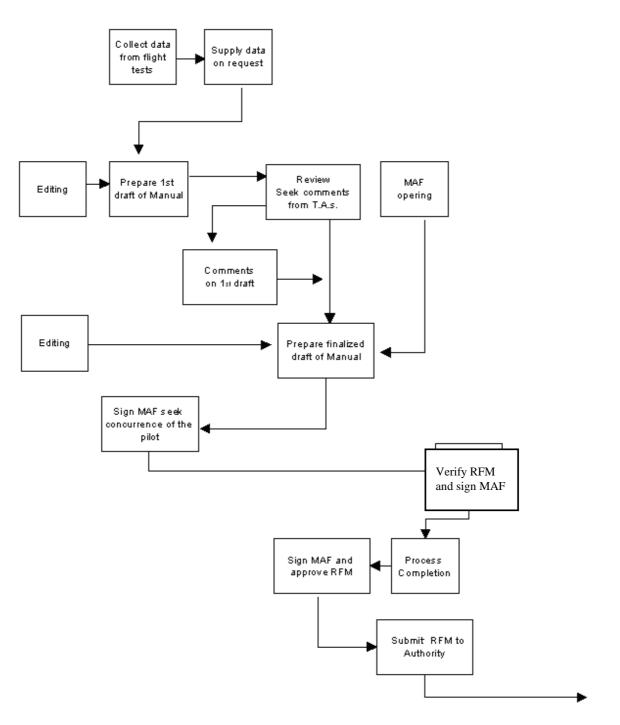
3 LIST OF APPENDICES

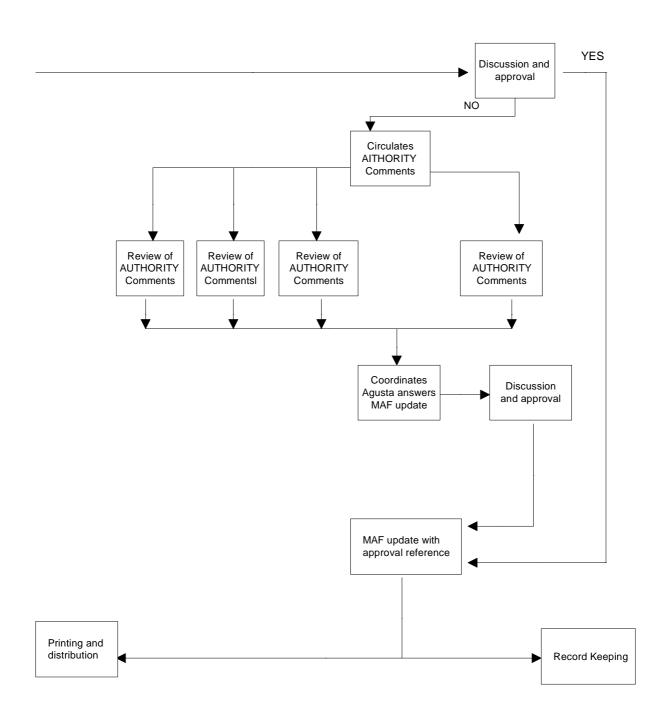
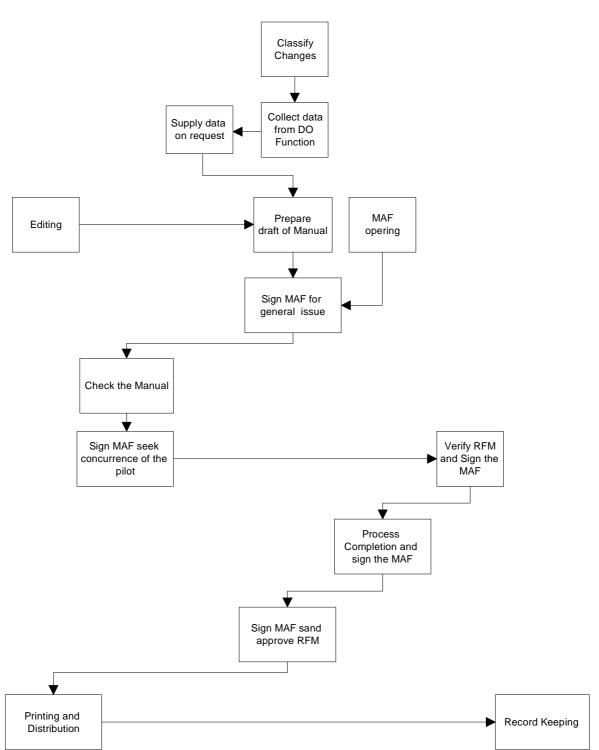
Appendix	1	Rotorcraft Flight Manual Approval flow chart
Appendix	2	CRI Flow Chart CRI Format
Appendix	3	CAI Flow Chart CAI Format
Appendix	4	Means of Compliance Codes
Appendix	5	Compliance Check List Format
Appendix	6	Specimen Rotorcraft Declaration of Compliance
Appendix	7	Documents Classification
Appendix	8	Type investigation process flow charts

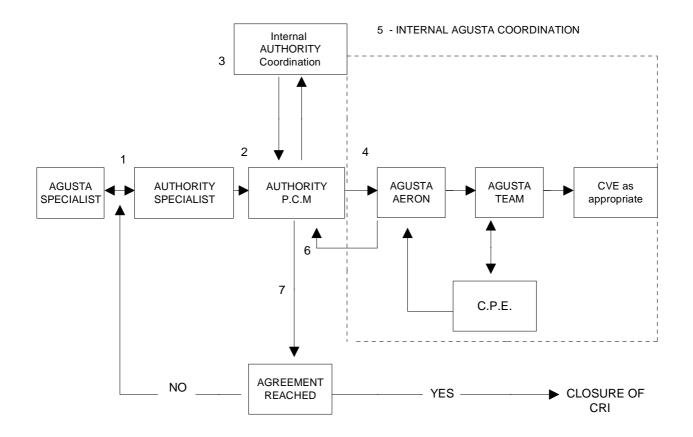
APPENDIX 1

MANUAL APPROVAL FLOW CHART

See the following page

ROTORCRAFT FLIGHT MANUAL APPROVAL - FLOW CHART

Continues at next pages.

Technical Publications
FTE
D.O. FUNCTIONS
CPE
AERON
CVEs
AUTHORITY TEAM
FILING DEPARTMENT
Discussion and approval
YES
NO
Circulates AITHORITY Comments
Review of AUTHORITY Comments
Review of AUTHORITY Commentsl
Review of AUTHORITY Comments
Review of AUTHORITY Comments
Coordinates Agusta answers MAF update
Discussion and approval
MAF update with approval reference
Printing and distribution
Record Keeping

RFM DOCUMENTARY CHANGES APPROVAL - FLOW CHART

APPENDIX 2

CERTIFICATION REVIEW (CRI) - FLOW CART

Explanation of the various steps:

1. Draft CRI preparation by Authority specialist with involvement of Agusta Specialist or CVE as necessary
2. Draft CRI transmission to Authority PCM
3. Internal Authority coordination
4. Official transmission of CRI from PCM to AG-AERON
5. Internal Agusta Coordination
6. Official transmission of CRI with Agusta position
7. Agreement reached?
   If YES the CRI is CLOSED, the way ahead and the relevant actions, if any, are defined.
   If NOT: following up process with discussion through phases 1 to 6 until an agreement is reached.

The format to be used in drafting CRIs is shown by Figure A

FIGURE A - CRI FORMAT

Project:	(1)	CRI No:	(5)
Regulation ref.:	(2)	Issue No:	(6)
Advisory Material/ Policy Ref:	(3)	Date:	(7)
		CRI Status:	(8)
		Next Action by:	(9)
Subject:	(4)	CRI Closure Target:	(10)

Statement of Issue (11)

Discussion: (12)

Authority Position:

Applicant's Position:

Conclusion: (13)

Instructions for completing the CRI format are provided below, using the same Paragraph numbers as indicated on Figure A.

(1) Identify Applicant and model designation

(2) List relevant regulation(s), including any Special Condition(s) issued on the model.

Examples: CS25.1309; or
Special Condition D-3

The following related information shall be shown, as appropriate:

(a) If a Special Condition has been, or will be, proposed.

Example: CS29.1318
Special Condition Proposed

(b) If a petition for an exemption or reversion to an earlier requirement standard has been filed by the Applicant.

Example: CS27.954
Exemption or Reversion

(c) If an “Equivalent Safety Finding” is an issue.

Example: CS23.789
Equivalent Safety Finding

(3) List any advisory material or regulatory policy relevant to the issue, such as ACJ, AMJ, JAA Interim Policies and Guidance Material.

(4) Identify the issue by a short, concise, descriptive subject title.

Example: Head Up Display (HUD)

(5) Alphanumeric issue identifier, e.g. A-1, D-2, F-5 etc.
The first digit is an alphabetic identification of the technical area of prime concern using:

A Administrative & General

A-1 Authority Agreed Type Certification Basis
A-2 N/A
A-3 Environmental Standards
A-4 Documentation for Type Certification
A-5 Type Design Definition for Type Certification

For Aircraft Products

B - Flight
C - Structures
D - Design & Construction
E - Powerplant
F - Equipment
G - Operating Limitations and Information including AFM
J - APU
K - AWO
M - MMEL
N - Noise and Emissions
O - Operational Items

The second digit is a number indicating the sequence of the issue number within prime area of concern group.

(6) It is expected that most issues will be resolved in a number of phases identified by the Issue number. The CRI will be revised by Authority Team members to indicate significant progress, and the Issue number will be raised for each such revision. Issue 1 may consist of no more than a statement of the issue, without discussion or position. The last issue is when the CRI is revised to summarise the resolution of the issue,

including final Applicant and Authority positions, the conclusion, and change of the CRI Status to "closed".

(7) The date at which the latest Issue is issued

(8) The CRI Status will indicate the status of issue resolution, i.e. "OPEN" or "CLOSED". The status "OPEN" or "CLOSED" DOES NOT NECESSARILY INDICATE COMPLIANCE STATUS.
The CRI Status will remain "OPEN" until final action has been completed by the CD and NAA.

(9) The "Next Action By" identifies the person(s) or body responsible for the next action in progressing the closure of the CRI.

(10) When a CRI is first developed, the PCM should agree a closure target date with the Applicant. Any change in this target date must be negotiated between the PCM and Applicant.

(11) <u>The "Statement of Issue" is probably the most important part of the paper.</u>
The first and most important step in resolving any significant issue is to put forth the issue in a clear, short, and concise statement that is understood by all concerned.

Example: The Applicant has request approval of a Heads-Up Display (HUD) installation.
The Type Certification Basis (TCB) does not include approval criteria for HUD.

(12) Provide a summary discussion of the issue. This may be broken down to:

(a) A non-controversial background statement

(b) A Authority Position Statement to explain the Authority concerns, opinions, arguments etc.

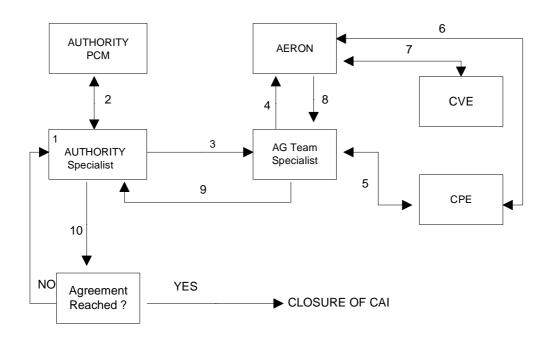
(c) Development by the Applicant of an Applicant's Position Statement, providing comments on the issue, opinions, arguments, etc...

The discussion statement may be as long as necessary to document the background behind an issue and to present both sides of the issue (if controversial); however, every effort should be made to keep it as concise as possible without compromising understanding for resolution.
Reference to letters or other documents may be necessary to cover details.

At each subsequent issue, the text from previous editions will normally be retained so that reference back to previous issues is not necessary to understand the status of resolution.
The purpose of the discussion statements is to provide an understanding of the issue and the most current position of all parties, on its resolution and the path leading to the resolution.

(13) When a decision on how to resolve an issue has been reached, this decision will be documented by the PCM in the "conclusion" statement.
In some cases a tentative conclusion may be stated in advance of a final agreed position.

APPENDIX 3

C.A.I. FLOW CHART

1. Need for CAI identified by Authority Specialist
2. Coordination between Specialist and PCM
3. Transmission of CAI to Agusta Team Specialist, with Authority position
4. Info to AERON
5. Coordination with CPE
6. Agusta position identified by CPE
7. Coordination, up to agreement, between AERON and CVE

8/9. Agusta position notified through Agusta Specialist, to Authority specialist

10. Agreement Reached ?
    - If YES: The ACTION is defined and CAI closed
    - If NO: Follow up process with discussion through steps 1 to 10 until an agreement is reached

APPENDIX 4

MEANS OF COMPLIANCE CODES

<table>
<tr><th>Type of Compliance</th><th>Means of Compliance</th><th>Associated Compliance Documents</th></tr>
<tr><td rowspan="4">Engineering Evaluation</td><td>MC0: Compliance statement:
• reference to Type Design
• documents
• election of methods,
• factors....
• definitions</td><td>Type Design Documents Recorded Statement</td></tr>
<tr><td>MC1: Design Review</td><td>Description, Drawings</td></tr>
<tr><td>MC2: Calculation/Analysis</td><td>Substantiation Reports</td></tr>
<tr><td>MC3: Safety Assessment</td><td>Safety Analysis</td></tr>
<tr><td rowspan="4">Tests</td><td>MC4: Laboratory Tests</td><td rowspan="4">Test Programme
Test Reports
Test Interpretation</td></tr>
<tr><td>MC5: Ground Tests on related product</td></tr>
<tr><td>MC6: Flight Tests</td></tr>
<tr><td>MC8: Simulation</td></tr>
<tr><td>Inspection</td><td>MC7: Design Inspection</td><td>Inspection Reports</td></tr>
<tr><td>Equipment Qualification</td><td>MC9: Equipment Qualification</td><td>Note: Equipment qualification is a process which may include all previous means of compliance</td></tr>
<tr><td>All</td><td>MC10: Compliance already provided on similar cases that is transferable to the case under evaluation</td><td>All documents previously used properly extended for validity</td></tr>
</table>

APPENDIX 5

COMPLIANCE CHECK LIST FORMAT

<table>
<tr><td>AGUSTA</td><td colspan="2">Helicopter
Model __________</td><td colspan="3">COMPLIANCE CHECK LIST (CCL)</td><td colspan="2">Report No. _________
Issue _______ Date _________</td></tr>
<tr><td colspan="2">FAR/ CS Requirement
Paragraph</td><td>Title Text</td><td>System Ref. (1)</td><td>Means of Compliance (2)</td><td colspan="2">Compliance Document (Number, Issue, Title)</td><td>NOTES (3)</td></tr>
<tr><td colspan="2"></td><td></td><td></td><td></td><td colspan="2"></td><td></td></tr>
</table>

(1) Reference of system or subsystem (e.g. ATA Codes)

(2) Means of Compliance Codes in accordance with Appendix 4

(3) Notes, Clarifications, Explanations as appropriate

APPENDIX 6

DECLARATION OF COMPLIANCE

References

1. "Type Design Definition" Doc. n° XXXXXXXXXXXX rev. X dated 99.99.9999
2. Applicable Regulations as defined in CRI A-01 ENAC Type Certification Basis, Issue X, dated 99.99.9999
3. Compliance check list final ⇨ see CSD List as follow

N° Report	Rev.	Titolo	Data emiss.	

4. "List of documents required for type certification approval" Doc. n° XXXXXXXXX rev.X (as quoted in the CCL/C,S,D,s final)
5. Critical Part List Doc. n° XXXXXXXXXXXX rev. X dated 99.99.9999
6. CMR list Doc n° XXXXXXXXXXX rev. X dated 99.99.9999
7. Prod. Conf Doc n° XXX-XX-XX rev X dated 99.99.9999
8. "Airworthiness Limitations section" ALS (Ch 4 MM) Doc. n° XXXX/XXX-XX-X issue X dated 99.99.9999

On behalf of Agusta S.p.A. I hereby declare that the Compliance Investigation has shown that the rotorcraft .....,. as defined under reference 1 complies with the Applicable Regulations.

Details of compliance are recorded in the ref. 4 and associated Compliance Checklist (ref. 3).
No features or characteristics are found which would make the rotorcraft ...... unsafe provided it is operated and maintained in accordance with instructions and limitation as defined in the corresponding approved documentation.

Agusta S.p.A. will undertake the responsibilities of Type Certificate Holder as laid down in EASA Part 21as regarding incident reporting, record keeping and instructions for Continued Airworthiness.

Date ...... Signature

(Agusta HDO) ________________________________

APPENDIX 7

DOCUMENTS CLASSIFICATION

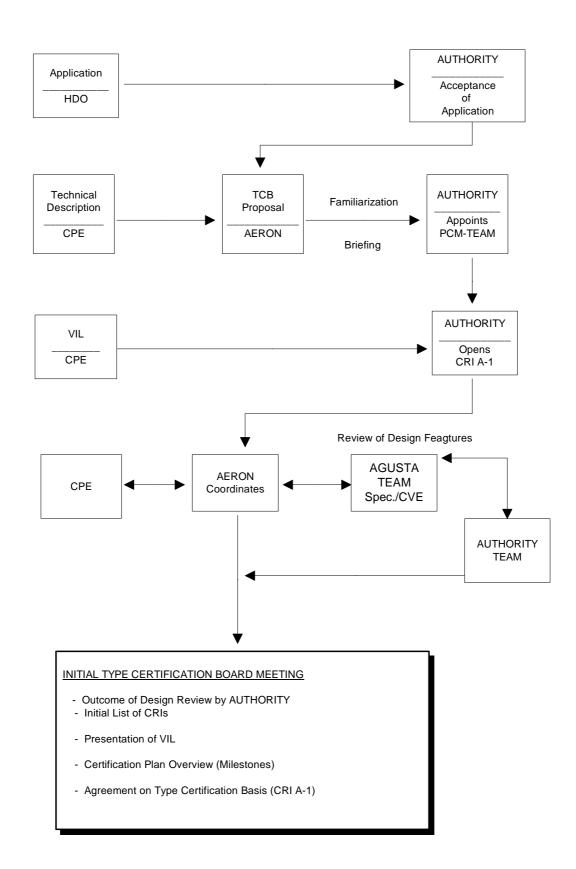
CLASS 1	-	Mandatory certification documents requiring direct approval by the Authorities. Rotorcraft Flight Manual, Airworthiness Limitations, MMEL (as applicable), CMR.
CLASS 2	-	Certification compliance reports requiring detail discussion/agreement at specialist level.
CLASS 3	-	Certification compliance reports accepted by the Authority without specific discussion and kept on Company file to be made available on request.
CLASS 4	-	Reports submitted for information only.

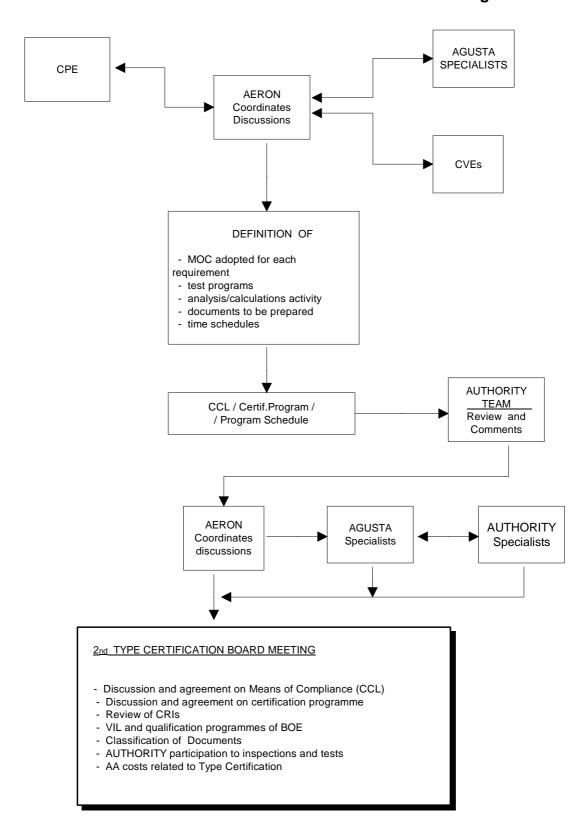
APPENDIX 8

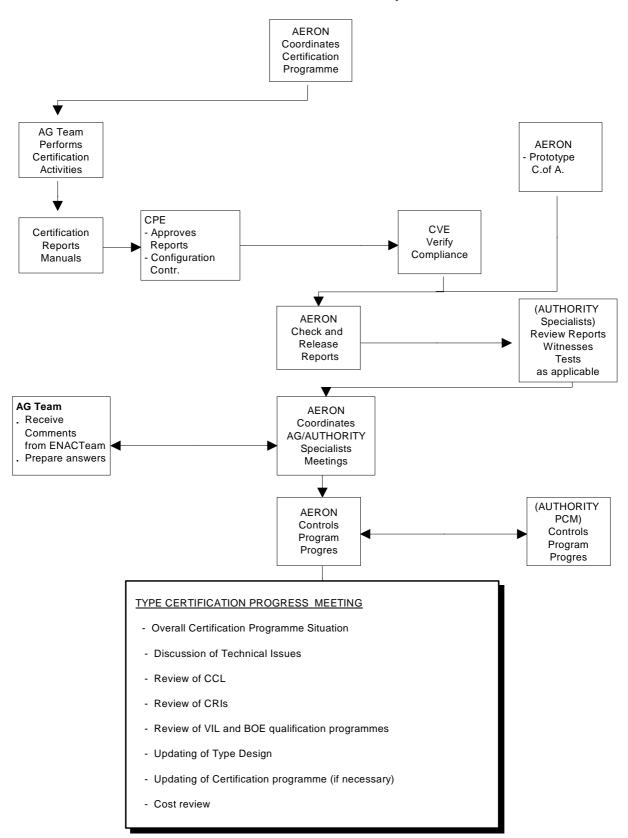
TYPE INVESTIGATION PROCESS FLOW CHARTS

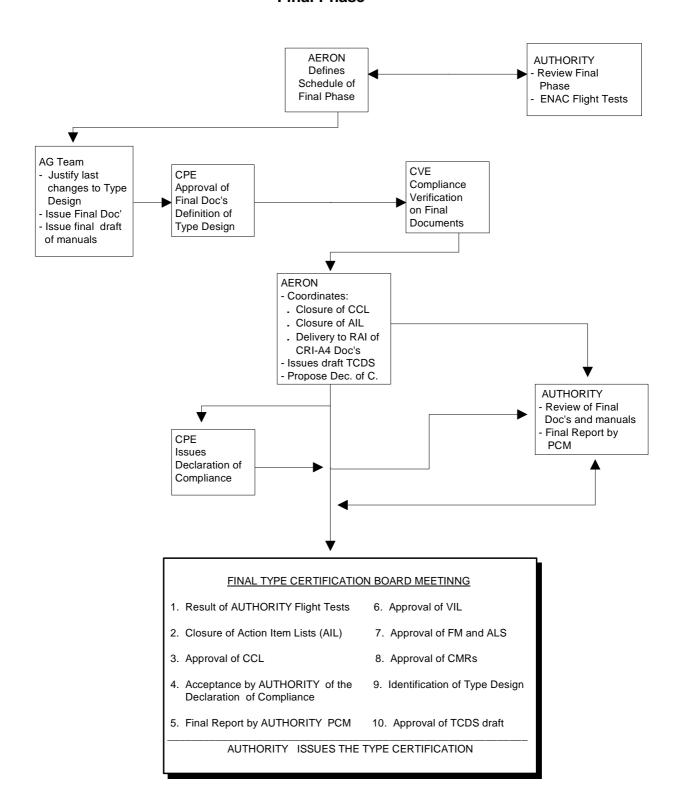
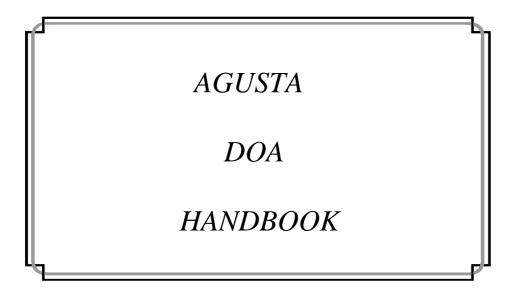
See the following pages.

TYPE INVESTIGATION PROCESS

1ST PHASE: Definition of Type Certification Basis

TYPE INVESTIGATION PROCESS

2nd PHASE: Definition of MOC and Certification Program

TYPE INVESTIGATION PROCESS

3rd PHASE: Demonstration of Compliance

TYPE INVESTIGATION PROCESS

Final Phase

PROCEDURE FOR CLASSIFICATION
AND
APPROVAL OF CHANGES TO TYPE DESIGN

DOC. N° C750-02-003.2A

ISSUE L **DATE: February 28, 2011**

TABLE OF CONTENTS

ISSUE STATUS AND APPROVAL

ISSUE	DESCRIPTION		
A	First issue	Prepared Checked P. G. Colombo Approved P. Alli	Date 01/12/00 Date 01/12/00 Date 01/12/00
B	Updating of the referenced procedures. Updating in the work sharing for the NDC management and related new NDC form. Introduction of the concept on documentary changes of RFM under PART 21.A263(b)(4) General improvement of wording	Prepared IPQ Checked P. G. Colombo Approved P. Alli	Date 20/01/03 Date 20/01/03 Date 20/01/03
C	Replacement of the references: from ENAC and JAA to Authority from PART 21 to EC regulation 1702/2003 Part 21 Update of the NDC section III form Minor updating to improve readability	Prepared Airworth. Off. Checked P. G. Colombo Approved P. Alli	Date 20/01/04 Date 20/01/04 Date 20/01/04
D	Updating from compliance with EASA Part 21; in particular for the introduction of the environmental protection concepts and of the import requirements raised by any importing authority outside EU. Updating par. 1.6 in order to improve the description of requirements and responsibilities for documentary changes of RFM.	Prepared IPQ Checked P. G. Colombo Approved P. Alli	Date 06/09/04 Date 06/09/04 Date 07/09/04
E	Updating of the referenced procedures. Updating for the NDC numbering and explanation (appendix A1). Make available the NDC form through Panagon (rif. AG-TEC209). Updating par. 1.2 in order to improve the identification of design changes.	Prepared IPQ Tecnologie Checked G. Gino Approved G. Monti	Date 20/01/06 Date 20/01/06 Date 30/01/06
F	Updating of the referenced procedures. Updating the NDC form , the explanation (appendix A1) and the NDC approval flowchart (appendix A2) Updating par. 1.2.5 in order to improve the NDC management.	Prepared IPQ Tecnologie Checked G. Gino Approved G. Monti	Date 28/07/06 Date 28/07/06 Date 28/07/06

ISSUE	DESCRIPTION	
G	Updating of the text taking into account AW Company Notices " n° 01/07, 04/07, 07/07, 08/07 e 09/07. Introduction of the reference to EASA Form 31 "Application of for Approval of Major Change/Major Repair Design". Elimination of Appendix 1 "fac-simile NDC". Note This procedure -3.2A cancels and supersedes the document C750-02-003.2	Prepared IPQ Tecnologie Date 01/06/07 Checked G.Gino Date 01/06/07 Approved G. Monti Date 11/06/07
H	Introduction of the approval process of the RFM stand alone changes and RFM changes related to minor changes to the Type Design (ref. EASA form 36)	Prepared IPQ Tecnologie Date 20/11/07 Checked G.Gino Date 20/11/07 Approved G. Monti Date 20/11/07
I	Updating the reference/name of quoted procedures. Introduction of the procedure for approval of RFM changes. Introduction of the design changes information to be recorded. NDC form AG-TEC209 improved by adding a box for checking whether NVG is affected by the change, and splitting the box for recording the reason of change and the rationale of the classification.	Prepared IPQ Tecnologie Date 30/06/08 Checked G.Gino Date 30/06/08 Approved G. Monti Date 07/06/08
J	Updating the reference/name of quoted procedures. Updating of paragraph 1.6 in order to clarify the Manuals changes approval process.	Prepared IPQ Tecnologie Date 09/07/09 Checked G. Gino Date 09/07/09 Approved G. Monti Date 13/07/09
K	Minor updating to improve readability and updating the reference/name of quoted procedures. Clarification on RFM Change Project Package procedure.	Prepared IPQ Tecnologie Date 12/11/09 Checked G. Gino Date 12/11/09 Approved F.Nannoni Date 12/11/09
L	Not significant changes. • Minor updating to improve readability • Updating of reference/name of quoted procedure. • Introducing clarification on the Changes classification reassessment trough the CPE signature on NDC section II.	Prepared M. Di Noia Date 28/2/2011 Checked G. Gino Date 28/2/2011 Approved F.Nannoni Date 28/2/11

REFERENCES

EC Regulation n. 1702/2003 Part 21 “Certification of Aircraft and related products, parts and appliances, and of design and production organizations

C750-02-002 “The design assurance system”

C750-02-003.1 “Type Investigation Procedure”

C750-02-003.3 “Procedure for Continued Airworthiness”

C750-02-003.5 “Procedure for Equipment Qualification”

AWEOS011 “Panagon user manual”

100-50-140 “Gestione Bollettini Tecnici”

100-50-157 “Ispezioni e prove nei processi di Certificazione Civile”

100-50-158 “Guidance criteria for the classification of changes to Type Design”

100-50-163 “Gestione documentazione di responsabilità dell’Ente Airworthiness”

100-50-176 “Conformità alle norme di aeronavigabilità e programma di omologazione. -Modalità di preparazione e gestione dei documenti relativi”

100-50-182 “Approvazione di installazioni comprendenti apparati non approvati su elicotteri destinati all’impiego civile”

100-50-198 “Design Change Authorization (AMD)”

100-55-015 “Istruzione per la compilazione dell’Engineering Order”

C740-07 “Manuale di gestione della configurazione”

IQ S015 “Qualification and Quality Assurance Requirements for Suppliers of Equipment during design and Development Phases”

SCOPE

According to PART 21 - Subpart D, each change to the Type Design must be approved by the Airworthiness Authority; PART 21A.91 establishes that changes must be classified as MAJOR or MINOR. Under a DOA status, MINOR design changes are subject to company approval in accordance with a procedure established and agreed (Ref. to PART 21.A263(c)(2)).

The intents of this procedure are:

- to establish procedure for the approval of changes;
- to achieve and maintain the privileges envisaged by PART 21.A263(c)(2) for MINOR changes;
- to issue of Information and/or Instruction under PART 21.A263(c)(3);
- to establish the procedure for approval of changes to Rotorcraft Flight Manual (RFM), including documentary changes under PART 21.A263(c)(4).

APPLICABILITY

The procedures established in this Section of the DOA Handbook are applicable to all changes, both hardware and software, to an approved helicopter type design either they concern parts of the helicopter designed by Agusta or the change consist of, or include, a modification to parts or appliances designed by Subcontractors.

The documents Specifica Tecnologica Agusta di Progetto (STAP) is referred on the drawing; therefore each changes to the STAP must be considered as change to the Type Design. Other than the drawing modification also each changes to the documentation that list the critical parts and their status (e.g. Vendor Item List, critical parts list, production configuration) must be considered as change to the Type Design, therefore must be approved. See procedures C750-02-003.1 for the original definition of an approved aircraft type design.

Aviation products are global products and need to be marketed both inside and outside EU.
In order to accomplish the latter case, a major change to the approved type design may need to be approved by the competent Authority of each interested country outside EU.
Given that the principles of the Type Investigation Process are world wide accepted, specific procedures may be applicable depending on the relationship of the involved countries and import requirements may be raised by the importing Authorities.
These situations are managed on a case by case basis by the Office of Airworthiness in the way and time scale appropriate to the marketing needs.

DEFINITIONS

MINOR Change
A change is classified as "MINOR" when it has no appreciable effect on weight, balance, structural strength, reliability, operational characteristics, noise, fuel venting, exhaust emissions, or other characteristic affecting the airworthiness of the product.

MINOR/A change
MINOR change for which a formal showings of compliance against the rules is appropriate

MINOR/B change
MINOR change that is very simple so as not to justify formal showings of compliance against the airworthiness rules

MAJOR Change
Any change not falling under the definition of MINOR change.

Stand-Alone RFM revision
RFM changes not related to a technical design change. Such changes, when not associated with a type design change may be classified as minor o major according to their perceived nature and impact on airworthiness.

RFM documentary changes (See GM 21A.263(c)(4))
RFM changes that should normally affect only existing approved data, for example:

- editorial changes or corrections to the RFM;
- changes to information in Authority approved section that are within all previously Authority approved limitations and procedures;
- the addition of compatible and previously Authority approved RFM temporary changes, appendices or supplements;
- etc.

ABBREVIATIONS

AE	Airworthiness Engineer
AERON	Airworthiness Office
H/AERON	Head of the Airworthiness Office
CP	Compliance Investigation Program
CPE	Chief Project Engineer
CVE	Compliance Verification Engineer
DDP	Declaration of Designed and Performance
EO	Engineering Order
DM	Data Management
NDC	Notice of Design Change
RFM	Rotorcraft Flight Manual
TA	Technical Area
VIL	Vendor Item List

1 THE PROCEDURES

The procedure for the classification and approval of changes to type design is handled through the form NOTICE OF DESIGN CHANGE (NDC). The format of NDC form is made available through the PANAGON system in the ≺Classe Documento “Moduli DT”➢, file AG-TEC209.

The NDC form is not used for managing MINOR/B changes. See paragraph 1.2.

Typically one NDC is used to deal with a change which is evaluated against the approved type design. There may be cases in which it could be cost / effective to pull together more than one change and carry out one approval process through one NDC; in such cases the whole package will be approved, not the single change.

The number of the NDC, for MINOR/A and for MAJOR changes is referenced in the relevant box of the Engineering Order form. See 100-55-015. The number of the NDC is provided by the “Data Management” office of the “Engineering Process & Planning” department.
The NDC is made available to all the Company personnel through the PANAGON system.

The NDC form may be also used to carry out a Company approval process; in such case a different NDC code number is available. Also relevant procedure is the same here described except the Agency involvement.

1.1 Initiation Phase/ Classification of design changes

1.1.1 Origin of the change

Reasons for initiation of a change can be one of the following:
- improvement of the design or manufacturing (including bought-out equipment);
- customer or operators request;
- result of investigation on in service problems;
  Note: See procedure C750-02-003.3 for the management of continued airworthiness issues related to problems arisen in production or in service.
- problems arisen during production (ref. 100-50-198).

1.1.2 Starting of the process and classification of the change.

Changing the approved Type Design is under the responsibility of the CPE for the interested product line. One or more design and test areas may be involved in the definition, design and development of the change.

Classification of the change is the responsibility of the CPE on the basis of:
- an overall engineering judgement;
- an assessment of the impact of the change on the airworthiness and environmental protection aspects;

the use of guidance criteria defined in the 100-50-158 through the check list made available through the PANAGON system in the ⋞Classe Documento "Moduli DT"➢, file AG-TEC221.

For each Type Design changes the CPE is responsible to record and make traceable at least the following information:
- helicopter type;
- Engineering Order number;
- drawing number / P/N and issue status;
- title;
- change classification decision (Minor B, Minor A, Major);
- change classification code according to 100-50-158 (Mandatory for Minor B changes);
- the rational for change classification decision. This information shall be recorded in case of the change classification code is not exhaustive.
- NDC number (only for Minor A or Major changes);
- Date of Engineering Order approval.

The configuration control procedure is defined in the document C740-07.

1.2 Company approval of changes

MINOR/B changes are classified and approved directly by the CPE with the signature of the form "Engineering Order" (ref. 100-55-015).

MINOR/A changes are managed by AERON for the achievement of the Company approval.

MAJOR changes are managed by AERON for the achievement of the Company approval and for the granting of AUTHORITY approval.

Basic concepts and criteria of C750-02-002 and C750-02-003.1 are followed with appropriate adaptation, commensurate to the level of complexity of the change under approval.

In particular for approval of changes to approved manuals see paragraph 1.6.

For management and approval of equipments or systems “NO HAZARD” see the 100-50-182.

As soon as the CPE has got the necessary information, he/she provides them to H/AERON for starting a formal process for approval of MINOR/A and MAJOR design change. This is achieved through the section I of the NDC that provides:

- identification

  Note: In the most frequent case of a change described by drawings, the change is identified by the top level drawing in the product drawing tree that is modified as a consequence of the change.
  Those drawings that are affected only by the need to manage the configuration but which are not affected by any technical issue, are excluded (e.g. general assy drawing).
- classification;
- applicability;
- reasons for change decision;
- reason for change classification (see 100-50-158);
- description of the change, detailed as appropriate to highlight the complexity and significance in respect of the type design already certified. This may be done either on the NDC directly or on a Technical document.

The section I of the NDC is filled by the CPE function, usually the appointed Project Engineer.
Once filled, the master of the NDC section I is transmitted to the Data Management (DM) office for managing the information and record keeping. Notification of the NDC section I availability is provided to AERON for the subsequent steps.

The CPE also provides the applicable time scales.

1.2.1 Appointment of a Change Approval Coordinator (AE)

For MINOR/A changes an AE is appointed by H/AERON as co-ordinator for the approval process. The AE is responsible to collect all information from the design and test areas as necessary to manage the investigation activity to be performed for the approval of the change.

For MAJOR changes an Agusta team is nominated, comprehensive of the disciplines relevant to the change. In this case the AE acts as the team leader and makes sure that the team members are informed about the applicable procedures and the technical information.

See 100-50-175 for details on the functions and responsibilities of the AE, the CVEs, the specialists.

1.2.2 Definition and agreement of the Compliance Investigation Program (program for approval)

The AE, with the support of the relevant design and test areas / Agusta Team / CVE fill the section II of the NDC form and gets the necessary signatures.

The NDC section II provides the design change program of approval:

- proposal of a Certification Basis and an applicable Environmental Protection Requirements with supporting justification. This may be done either on the NDC directly or on a Technical document;
- Compliance Check List with identified MOC and compliance documents and a Compliance Investigation Program. This may be provided directly on the NDC or in separate document which will be cross referenced in the NDC.

See 100-50-176 for the definition and approval of the certification program.

With the signatures of the of the NDC section II the CPE reassess change classification, on the basis of the airworthiness applicable requirements.

Specific import requirements of countries outside EU may need to be considered. In such case, they are dealt with in the way and with the timescale appropriate to the specific case. See also the “Applicability” paragraph. In case of contradiction between the certification basis and the import requirements, the applicant and the Agency will agree the way forward on a case by case basis.

The master of the NDC section II is transmitted to the DM office for managing the information and record keeping and copy of it is also circulated by the appointed AE to the Agusta team together with the NDC section I.

1.2.3 Compliance demonstration

Upon signature of the section II of the NDC, the AE manages the compliance investigation program. The AE and the CPE office work in close contact to keep under control the evolution of the investigation program.

A program schedule including a list of compliance activities (e.g. test, analysis) and relevant time schedule is also to be prepared by the AE for the management of the investigation program.
See also 100-50-176 for the planning of activities.

The interested departments show compliance for the issues of competence and produce the related compliance documents consistently with the agreed certification program and plan.

The CVEs sign the compliance documents as applicable for compliance verification and the AE signs the compliance documents for check and release. See the report 100-50-175.

NOTE: Approval of Design Changes related to modification of Bough Out Equipment. A change to helicopter type design may consist of, or include, a modification to a BOE already approved for installation on the helicopter. In this case the AE is responsible:

- to coordinate activities needed for the qualification of the modified equipment applying procedure defined under C750-02-003.5;
- to manage the NDC including, within the relevant technical documents, references to the most up to date VIL, PS and DDP.

1.2.4 Proposal of change approval

On completion of the activities up to 1.2.3, the AE fill the section III of the NDC (See Appendix 1) and gets the signature of the H/AERON to inform the CPE of the completion of the compliance investigation program.

1.2.5 Company approval of the change

On the basis of H/AERON proposal, the CPE approves the change by signing the Declaration of Compliance provided in the section III of the NDC.
In case of Minor/A changes the CPE will directly transmit the master of the complete NDC section III to the DM office for managing the information and record keeping.

In case of Major changes after signature the section III of the NDC duly signed by the CPE will be returned to AERON. (See paragraph 1.4 for the Agency approval of Major changes).

After the Agency approval of the change AERON transmits the section III of the NDC form to DM office having properly quoted the approval reference, for managing the information and record keeping.

In case approval or validation has further been specifically granted for the same change by another Airworthiness Authority, the AE in charge will open (or revise, if already existing) section IV of the NDC with relevant information,.

The CPE, on a quarterly basis, transmits to the Agency PCM (copy to AERON) the list of the changes (MINOR/A and MINOR/B) approved by the Company in that period.

Appendix 1 provides flow chart of the process.

1.3 Authority approval of MINOR changes

Authority approval of minor changes is assumed on the basis of the privilege provided by PART 21.A263(c).

NOTE: The actual grant of this privilege has to be verified in the Terms of approval of the Design Organization Approval Certificate.

The Authority may call for meetings addressed to the following aspects of minor changes approval:

- review of classification,
- compliance investigations.

The CPE and a representative of the office of Airworthiness will attend those meetings; a minute of the meeting will be issued and circulated to the CPE, the Head of the Office of Airworthiness and the Head of DAS Monitoring Office.

In case the conclusion of such meetings should identify incorrect classification and/or inconveniences in the approval process, appropriate corrective actions will be taken.

1.4 Authority approval of MAJOR changes

1.4.1 General

Authority approval process of changes classified as MAJOR is based on PART 21.93 and 21.97.
All steps described in 1.2. for the Company approval of changes, properly phased with this procedure, still apply.
Steps leading to the Authority approval of a MAJOR change are described below.

See Appendix 1.

1.4.2 Application and supporting documents

The Office of Airworthiness submits to the Agency the application for approval of MAJOR design change trough the EASA form 31, signed by the HDO. (EASA Form 31 is available in the EASA website).

NOTE: Depending on program contingencies and complexity, a full CCL may follow the application provided enough information are given through the NDC to allow the Authority to organise their activity.

1.4.3 Agreement on the Compliance Investigation Program (See Appendix 1)

Based on the Company application and on the relevant information provided, Authority will establish and notify to Agusta the Focal Point or PCM and other Specialists in charge of conducting investigations for Authority approval of the change.
The Authority review the Certification Basis, applicable Environmental Protection Requirements, CCL and Compliance Investigation Program.

The Office of Airworthiness organise Authority/Agusta Specialists meeting and Interface Panels as needed.
CRI process could be used in assessing the Certification Basis, the applicable Environmental Protection Requirements and relevant technical issues.

At the end of this initial phase Authority agreement on Certification Basis, the applicable Environmental Protection Requirements, the relevant Compliance Investigation Program and the level of Authority involvement in the program are notified to the Company.

Where appropriate, depending on the complexity of the change, this initial phase can be closed through a Certification Meeting with Authority Team and upper Management.

1.4.4 Demonstration Phase

Once Certification Basis, the applicable Environmental Protection Requirements and Compliance Investigation Program has been established the phase of compliance demonstration is accomplished.
The AE is responsible to manage the timely accomplishment of the compliance demonstration and discussion with Authority. The CVEs are the point of contact for the technical issues for the Authority.

1.4.5 Approval phase

On completion of all activities established in the Compliance Investigation Program the Compliance Check List is closed and the updated versions of Manuals and TCDS is finalised as applicable.
The Declaration of Compliance together with the final version of the CCL and drafts of Manuals is submitted to the Authority by the Office of Airworthiness.
Authority notify by letter the formal approval of the Change together with approval of the updated versions of the Manuals.
When appropriate, a Final Certification Meeting with Authority is held

1.5 Issue of Information and/or instructions under Part 21A.263(c)(3)

A Change, once approved, may need to be retrofitted on in service helicopters. In such cases, appropriate information and/or instructions shall be provided through a Service Bulletin in order to give the helicopter operators all necessary data to apply the change. See the report 100-50-140 for the relevant detail procedure.

In accordance with EASA Part 21.263(c)(3) a DOA holder may issue information or instructions related to approved changes to Type Design, containing the statement “The technical content of this document is approved under the authority of DOA nr. EASA.21J.005”, without prior verification by the Agency.

NOTE: The actual grant of this privilege has to be verified in the Terms of approval of the Design Organization Approval Certificate.

1.6 Changes to Manuals

1.6.1 General

The management and the approval of manuals changes are dealt with through the use of the Manual Approval Form (MAF) as per C750-02-003.1 par. 1.1.1(a) and (b) and the relevant Appendix A1.

In case of changes to the Type Design affecting the approved manuals (RFM and ALS), the manuals modifications shall be submitted to the Authority concurrently with the request of approval of the change.

In the following is described the specific process for management and approval of RFM changes.

1.6.2 RFM changes

For RFM a revision can be originated:
- by Major design changes;
- by Minor design changes approved under the DOA Authority;
- as a stand-alone modification;
- as documentary changes approved under DOA privileges.

1.6.2.1 RFM changes related to a Major design changes

In such cases:
- the NDC form is to be used for managing the design changes approval process;
- the MAF form is to be used for managing the RFM changes approval process.

The RFM modifications have to be submitted to the Authority concurrently with the request of approval of the design change trough the EASA form 31. See paragraph 1.4.

1.6.2.2 RFM changes related to a minor design changes

In such cases the NDC form is to be used for managing the design changes approval process. The NDC section II shall also identify the RFM applicable requirements to be complied with. The MAF form has to be used for managing the RFM changes approval process.

The Office of Airworthiness submits to the Agency the application for approval trough the EASA Form 36 (available in the EASA website). Once the Company approval process has been finalised, a copy of the MAF (with attached the RFM modification pages) and the NDC process documents will be submitted to the competent PCM.

Note: Despite the DO approval of the minor design change, the aircraft can't be cleared for delivery until the Agency approval of RFM changes.

After the Agency approval of the RFM change, the Office of Airworthiness transmits the section III of the NDC and the MAF to DM office, having duly filled the approval reference box, for managing the information and record keeping.

1.6.2.3 RFM stand-alone changes

The NDC form is to be used for managing the RFM stand-alone changes approval process although those changes can't be defined as Type Design changes. In such cases the NDC is intended as a tool for supporting the approval process.
The NDC section II will continue to identify the applicable requirements to be complied with in approving the RFM changes while using the MAF for managing the RFM changes approval process.

The Office of Airworthiness submits to the Agency the application for approval using the EASA Form 36.

Once the Company approval process has been finalised, a copy of the MAF (with attached the RFM modification pages) and the NDC section III sheet will be provided to the competent PCM.

After the Agency approval of the change, the Office of Airworthiness transmits the section III of the NDC and the MAF to DM office, having duly filled the approval reference box, for managing the information and record keeping.

1.6.2.4 Approval of the documentary changes to the Rotorcraft Flight Manual (RFM) under Part 21.A263(c)(4)

General
In accordance with Part 21, a DOA holder may approve the changes of the RFM, classified as Documentary Changes without prior verification by the Authority. (See Manual Approval Flow Chart for Documentary Changes at Appendix 1 of C750-02-003.1).

NOTE: The actual grant of this privilege has to be verified in the Terms of approval of the Design Organization Approval Certificate.

As for RFM stand-alone changes the NDC form is used as a tool for supporting the approval process.

Definition of documentary changes
Documentary changes to the RFM should normally affect only existing approved data.

Classification
The process will be initiated by the CPE office that shall classify the RFM changes as Documentary Changes through the selection of the pertinent box of the Manual Approval Form - MAF (see Appendix 1 of C750-02-003.1). In the following are listed some example of RFM changes as Documentary Changes (ref. GM to EASA part 21A.263(c)(4)):

- Editorial changes or corrections to the AFM.
- Changes to weight limitations that are within all previously EASA approved limitations (e.g., structural,
- noise, etc.)

- The addition of compatible and previously EASA approved AFM Temporary changes, appendices or Supplements.
- Conversions of previously FAA or EASA approved combinations of units of measurement added to the AFM in a previously approved manner.
- The addition of aircraft serial numbers to an existing AFM where the aircraft configuration, as related to the AFM, is identical to aircraft already in that AFM.
- The removal of reference to aircraft serial numbers no longer applicable to that AFM.

Preparation

The CPE collects the contributions of the pertinent DO Functions and prepares, in cooperation with “Product Support Engineering”, the draft of the RFM.

The CPE gets from AERON the numbered MAF fill the first part and sign it for the draft issue and submits the information and related MAF to the FTE.

The FTE on the basis of the information transmitted by the CPE, check the finalised draft and signs the MAF for the flight issue.

Verification

The CVE flight reviews the content of the RFM. See 100-50-175 for details of the CVE involvement.

The appointed AE manages the process of investigation of the RFM changes, signs the MAF that signify concurrence of the classification and management of the process.

Approval

The CPE approves the final draft of the RFM through the signature on the MAF.

Printing, distribution and record keeping

The AE submit the package (final draft of the RFM and related MAF) to the DM Office for record keeping and to the Technical Publication Department (Product Support Engineering) for printing and distribution. A copy of the updating to the RFM is transmitted to the Authority.

Approval statement

The RFM revision containing only documentary changes is issued with the following approval statement.

“Revision nr. XX to RFM N. YYY is approved under the Authority of DOA nr.[zzz]”

When approval status in shown on each page, a simplified statement such as “Approved under D.O.A.” may be used.

1.6.2.5 RFM Change Project Package procedure

In order to address multiple approval cases (change projects package) in one single revision of the RFM, a company process is followed for managing the approval through the MAF, which includes a "Record of Revisions" page/s organized as follows:

a. in the central column "**SUBJECT**" all the RFM pages affected by the revision are sorted in different groups, each of them referring to the modification originating the revision;
b. in the right hand column "**APPROVAL**", the approval authority and reference are shown.

The EASA approval of a package may have different approval references, i.e. one for each involved Project, but the same Revision Number and approval date.

After the EASA approval of a RFM Revision the Agusta DOA manages the final printing and the distribution of the affected RFM pages to the customers. The traceability of the revised pages inside the RFM is guaranteed by the Record of Revisions and the Log of Pages. This document is attached to the MAF.

Where a Quick Reference Handbook (QRH) exits, a between QRH and RFM Revision status is established. The bottom line, in the center column of the "Record of Revisions" table of the RFM, will show the corresponding QRH revision status.

If the RFM Revision does not affect the QRH, this will be highlighted by the sentence:
" This Revision does not affect the QRH". Conversely any new QRH Revision will make reference to the corresponding revision of the RFM in the QRH revision status page.

Example:

Record of Revisions

REVISION No.	**SUBJECT**	**APPROVAL**
XX	Section 1 Page 1-27	EASA R.C. xxxxx Date : dd/mm/yy
	Supplement 26 Pages 1, 6, 7, 8, 10, 29, 30	EASA R.C. xxxxx Date : dd/mm/yy
	Supplement 27	EASA R.C. yyyyy Date : dd/mm/yy
	“The changes to Section 1 of this Revision will be introduced in the QRH Revision N. xy” or (when no changes to the QRH are generated by this Revision) “This Revision does not affect the QRH“.	
	Section 2 Page 2-7; Section 5 Pages 1 to 6; Section 7 Page 7-6, 15, 16	Approved under Autority of DOA ToA EASA.21J.005 Date : dd/mm/yy
XY	Section 1 Page 8-22	EASA R.C. xxxxx Date : dd/mm/yy
	Supplement 27 Pages 1, 6, 29, 30	EASA R.C. xxxxx Date : dd/mm/yy
	Section 2 Page 8;Section 7 Page 7-8, 15, 18	Approved under Autority of DOA ToA EASA.21J.005 Date : dd/mm/yy

1.7 <u>Resolution of conflicts</u>

See C750-02-003.1

2 THE RESPONSIBILITIES

TASK / FUNCTION	CPE	H/AERON	AE	CVE	TA	PSE (*)
□ Decision to start	R					
□ Classification of Change	R	C				
□ NDC section I	R					
Company approval of changes						
□ NDC section II and Supporting documents	S		R		S	
□ Review and approval of compliance investigation program	R	S		S		
□ Conduct of Investigations	S		C		R	
□ Verification of Compliance				R		
□ Proposal of Approval		R				
□ Approval	R					
Authority approval of Minor Change						
□ Quarterly submissions of minor changes	R					
Authority approval of Major Change □ Application and management □ Draft Revision of Manuals □ Draft Revision of TCDS	According to C750-02-003.1					
Issue of Information and/or instructions under PART 21A.263(c)(3)	See report 100-50-140					
Approval of the Manuals changes	According to para 1.6 and according to Appendix 1 of C750-02-003.1					

R = Primary Responsibility
S = Support
C = Coordination
(*) PSE = Product Support Engineering

APPENDIX 1 - Design changes approval process flow charts

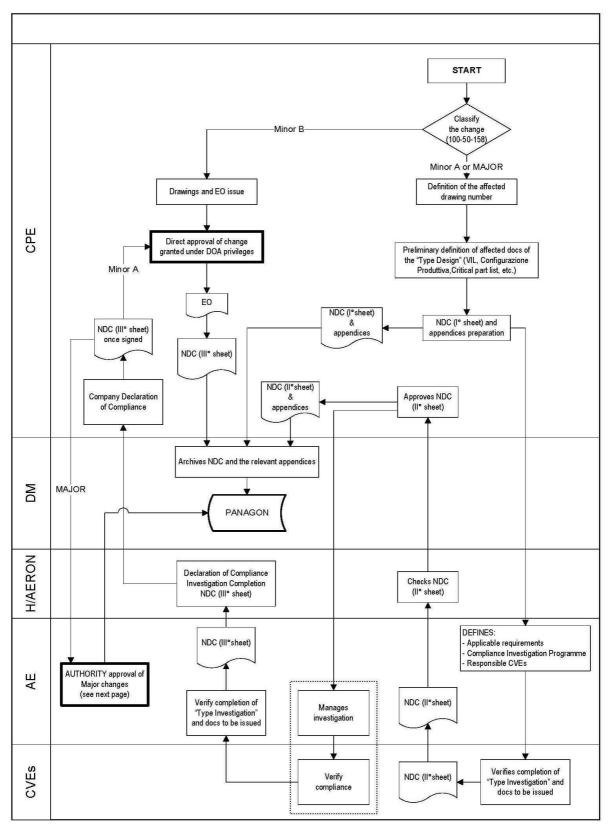



Fig. N°1 – Company Approval of Changes – Flow Chart

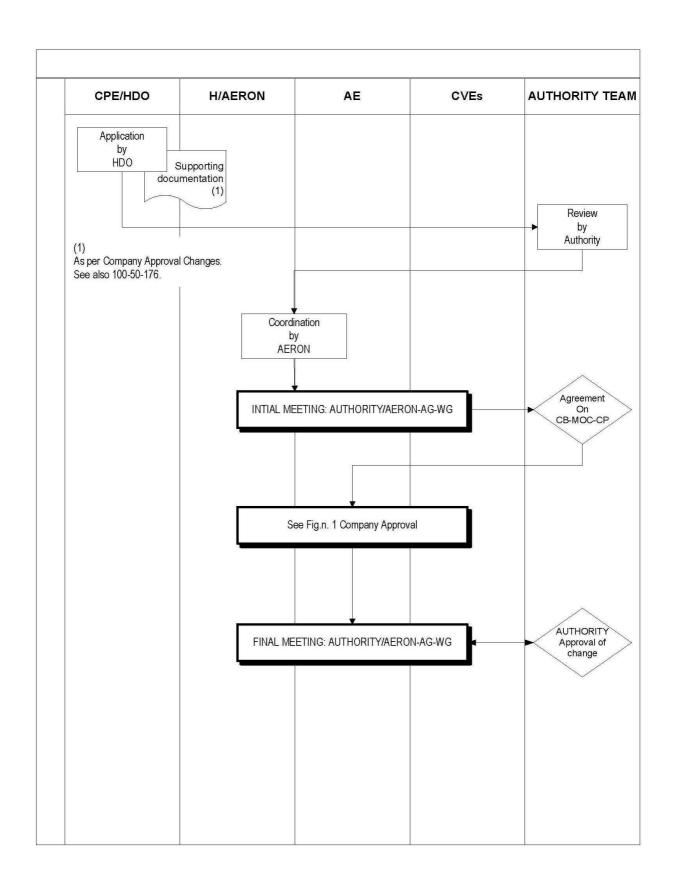
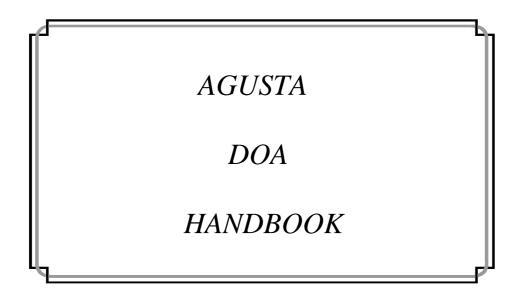



Fig. N°2 – AUTHORITY Approval of Major Changes – Flow Chart

PROCEDURE FOR CLASSIFICATION AND APPROVAL OF DESIGN MAJOR REPAIR

DOC. N° C750-02-003.2B

ISSUE B **DATE: February 28, 2011**

TABLE OF CONTENTS

ISSUE STATUS AND APPROVAL

ISSUE	DESCRIPTION	
A	First issue	Prepared IPQ Tecnologie Date 01/06/07 Checked G.Gino Date 01/06/07 Approved G.Monti Date 07/06/07
B	Not significant changes • Updating of the responsibilities table.	Prepared M. Di Noia Date 28/2/2011 Checked G.Gino Date 28/2/2011 Approved F. Nannoni Date 28/2/11

REFERENCES

EC Regulation n. 1702/2003 Part 21 “Certification of Aircraft and related products, parts and appliances, and of design and production organizations”

C750-02-002 “The design assurance system”

C750-02-003.1 “Type Investigation Procedure”

PRO.FSE.019.96 “Repairs design, management and approval”

SCOPE

According to PART 21 - Subpart M, each repair design must be approved by the Airworthiness Authority; PART 21A.435 establishes that repairs must be classified as MAJOR or MINOR.
Under a DOA status, the design of MINOR and MAJOR Repairs are subject to company approval in accordance with a procedure established and agreed (Ref. to PART 21A.263(c)(2) and 21A.263(c)(5)).

The intents of this procedure are:

- to establish the procedure for the classification and approval of repair design;
- to manage the privileges envisaged by PART 21A.263(c)(2) for MINOR Repairs;
- to manage the privileges envisaged by PART 21A.263(c)(5) for MAJOR Repairs.

APPLICABILITY

The procedure established in this Section of the DOA Handbook is applicable to all repair design to an in service helicopters for which Agusta holds a Type Certificate.
It is not applicable to:

- the engines and parts with TSO approval;
- the replacement of damaged parts;
- prototypes and helicopters before the delivery.

DEFINITIONS

REPAIR (rif. PART 21A.413(b))
A repair means elimination of damage and / or restoration to an airworthy condition following initial release into service by the manufacturer of any product, part or appliance.
Elimination of damage by replacement of parts or appliances without the necessity for design activity shall be considered as a maintenance task and shall therefore require no approval under this Part.

ACRONYMS

AE	Airworthiness Engineer
H/AERON	Head of the Airworthiness Office
CPE	Chief Project Engineer
CVE	Compliance Verification Engineer
NTR	Nota Tecnica di Riparazione (Repair Technical Report)
TA	Technical Area

1 THE PROCEDURE

The procedure for the classification and approval of repairs is handled through the form Repair Technical Report (NTR). The NTR form is defined in Appendix 2 of the procedure PRO.FSE.019.96.

The design of the repairs classified as MAJOR shall be subjected to an investigation process to demonstrate the compliance with the applicable certification specification and environmental protection requirements. Basic concepts and the criteria of the procedures C750-02-002 and C750-02-003.1 will be followed as appropriate.

In accordance with the privilege defined in the Part 21A.263(c)(5), Agusta as a DOA holder, approves the design of MAJOR repairs without prior verification by the Agency.

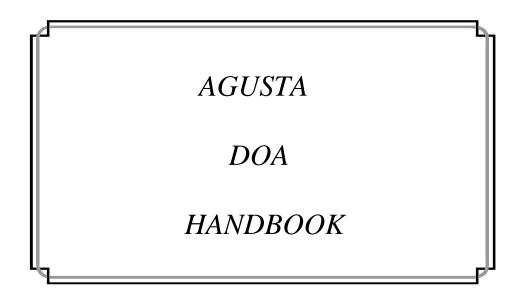
NOTE: The actual grant of this privilege has to be verified in the Terms of approval of the Design Organization Approval Certificate.

The CPE approves the MAJOR repairs by signing the declaration of compliance provided in the NTR form and transmits the master of the complete NTR to the “Data Management” office of the “Engineering Processes & Planning ” department for managing the information and record keeping.

The detailed procedure for the classification, management and approval of repair is defined in the document PRO.FSE.019.96.

2 THE RESPONSIBILITIES

FUNCTION TASK	CPE	H/AERON	AE	TA	CVE	Repair Function
Collects information						R
Classification of Repair	S			S		R
Damage analysis and corrective actions	S			S		R
NTR form						R
Company approval of Minor/B Repairs						
NTR and Supporting documents	S					R
Approval						R
Company approval of Minor/A & Major Repairs						
NTR and Supporting documents	S		R			S
Review and approval of compliance investigation program	R	S			S	
Conduct of Investigations	S		C	R		
Verification of Compliance					R	
Proposal of Approval		R				
Approval of Minor/A						R
Approval of Major	R					
Authority approval of the Design of Minor Repairs	Agusta DO under the privileges envisaged by 21A.263(c)(2).					
Authority approval of the Design of Major Repairs	Agusta DO under the privileges envisaged by 21A.263(c)(5).					

R = Primary Responsibility
S = Support
C = Coordination

PROCEDURE FOR APPROVAL OF FLIGHT CONDITIONS AND ISSUE OF A PERMIT TO FLY

DOC. N° C750-02-003.2C

ISSUE C **DATE: April 4, 2011**

TABLE OF CONTENTS

ISSUE STATUS AND APPROVAL

ISSUE	DESCRIPTION			
A	First issue	Prepared	IPQ Tecnologie	Date 20/11/07
		Checked	G.Gino	Date 20/11/07
		Approved	G.Monti	Date 20/11/07
B	Not Significant Changes • General revision to improve: the applicability, the identification of applicable privileges and the process.	Prepared	M. Di Noia	Date 28/02/11
		Checked	G.Gino	Date 28/02/11
		Approved	F.Nannoni	Date 28/02/11
C	Significant Changes: extension of privileges for Flight Conditions & Permit to Fly • Description improvement about the applicability of the referenced documents • Introducing of Flight Conditions definitions	Prepared	M. Di Noia	Date 18/3/11
		Checked	G.Gino	Date 18/3/11
		Approved	F.Nannoni	Date 5/4/11

REFERENCES

EC Regulation n. 1702/2003 Part 21 “Certification of Aircraft and related products, parts and appliances, and of design and production organizations”

EC Regulation n. 375/2007 “Amending Regulation (EC) n. 1702/2003 laying down implementing rules for the airworthiness and environmental certification of aircraft and related products, parts and appliances, and of design and production organizations”

ED Decision 2007/006/R dated 04/04/2007 amending Decision No 2003/1/RM of 17 October 2004 on acceptable means of compliance and guidance material for the airworthiness and environmental certification of aircraft and related products, parts and appliances, as well as for the certification of design and production organisations (“AMC and GM to Part 21”).

C750-02-002	“The design assurance system”
C750-02-003.4	“Procedure for Record keeping”
100-50-132	“AG Form 59 – Authorization for Experimental Aircraft Operation”
100-50-157	“Ispezione e prove nei processo di certificazione”
100-50-179	"Attività di manutenzione elicotteri sperimentali presso basi temporanee esterne”
100-50-180	“Operazioni e Manutenzione Aeromobili Sperimentali”
100-50-197	“Flight Conditions and Permit to Fly”
100-50-196	“Flight Risk Management”
AEQ-P 1632	“Attività sperimentale presso lo stabilimento di Vergiate”

SCOPE

For aircraft that do not meet, or have not shown to meet, applicable airworthiness requirements a Permit to Fly (PtF) can be issued in accordance with Part 21 – Subpart P.
To this purpose, for each aircraft for which a PtF is requested, the Flight Conditions (FC) have to be defined justifying that the aircraft can perform the intended flight(s) safely.

The intents of this procedure are:

- to establish a procedure for the definition and approval of FC;
- to establish a procedure for issue of a PtF;
- to manage the privileges granted by the Agency under 21A.263(c)(6) and 21A.263(c)(7).

APPLICABILITY

The procedure established in this Section of the DOA Handbook is applicable to the approval process of the FC related or not related to the safety of design and issue of a PtF for an aircraft (managed by the Agusta Experimental Operation & Flight Test Department, or by the Production Organisation Agusta under the responsibilities of Design Organisation Agusta), that do not meet, or have not been shown to meet, applicable airworthiness requirements but are capable of safe flight under defined conditions, for the following purposes:

1 **Development.**
Company activities for:
   - testing of new aircraft or modifications;
   - testing of new concepts of airframe, engine and equipment;
   - testing of new operating techniques;
   - qualification of type design changes for which a type certification process is not in progress.

2 **Showing compliance with regulations or certification specifications.**
Activity performed within the certification process or changes to type certificate, with the evidence of the compliance with the airworthiness rules.

3 **Design organisation or Production Organisations crew training.**
Flights for training of crew that will perform design or production flight testing before the design approval and Certificate of Airworthiness can be issued.

4 **Production flight testing of new production aircraft.**

5 **Flying aircraft under production between production facilities.**

6 **Flying the aircraft for customer acceptance.**

7 **Delivering or exporting the aircraft.**
For the transfer at Agusta care of aircraft waiting to receive the formal approval of the modifications for which the Company and ENAC certification activities have been completed or for which the sole Company approval is requested.

8 **Flying the aircraft for Authority acceptance**

9 **Market survey including customer's crew training.**
Flights for the purpose of conducting market survey, sales demonstrations and customer crew training with non type certificated aircraft or A/C for which conformity with the approved type design has not yet been established or for non-registered A/C and before a Certificate of Airworthiness is issued and customer crew training.

10 **Exhibition and air show**
Flying the aircraft to an exhibition or show and participating to the exhibition or show before the design approval is issued or before conformity with the approved design has been shown.

11 **Flying the aircraft to a location where maintenance or airworthiness review are to be performed, or to a place of storage.**
Ferry flights in cases where maintenance is not performed in accordance with approved programmes, where an Airworthiness Directives (AD) has not been complied with, where the configuration is not allowed by the MEL or when the aircraft has sustained damage beyond the authorized limits.

12 **Flying an aircraft at a weight in excess of its maximum certificated takeoff weight for flight beyond the normal range over water, or over land areas where adequate landing facilities or appropriate fuel is not available.**

13 **Record breaking, air racing or similar competition**

14 **Flying aircraft meeting the applicable airworthiness requirements before conformity to the environmental requirements has been found.**
Flying an aircraft which has been shown to comply with all applicable airworthiness requirements but not with environmental requirements

15 **For non-commercial flying activity on individual non-complex aircraft or types for which a certificate of airworthiness or restricted certificate of airworthiness is not appropriate.**

Ref. EASA Part21A.701.

NOTE 1

The identification of the PtF purpose corresponding to the DO needs requires the evaluation of the following aspects:

- similar configurations previously dealt with;
- reference to cases already approved by the Authority;
- effects of the deviations from cases already known;
- deviations to the approved Type Design and their effect on the safety of flight.

Whenever it is not possible to refer with certainty to one of the types of PtF defined in EASA Part 21, the Office of Airworthiness has the responsibility to seek for the solution to be applied.

If there is a doubt the Office of Airworthiness shall involve the competent Authority.

These procedure it also applicable to the approval process of the FC on Third Parties demand.

DEFINITIONS

INITIAL FLIGHT
Flight performed with:

- a new type of aircraft;
- an aircraft modified by a change that is or would be classified as a “significant” major change;
- an aircraft whose flight and/or piloting characteristics may have been significantly modified;

and with the purpose of investigating and defining the basic flight envelope in terms of weight, range of longitudinal centre of gravity and velocity.

FC RELATED TO THE SAFETY OF THE DESIGN
The approval of FC is related to the safety of the design in the following cases:

- the aircraft is not in conformity with an approved design;
- an Airworthiness Limitation, or Certification Maintenance Requirements, or an Airworthiness Directives has not been complied with;
- the intended flight(s) is/are outside the approved envelope.
- the permit to fly is issued for the purpose of 21A.701(a)(15).

(Ref. Rif. ED Decision 2007/006/R).

FLIGHT CONDITIONS
Flight conditions include:

a) the configuration(s) for which the permit to fly is requested;
b) any condition or restriction necessary for safe operation of the aircraft, including:
   1. the conditions or restrictions put on itineraries or airspace, or both, required for the flight(s);
   2. the conditions and restrictions put on the flight crew to fly the aircraft;
   3. the restrictions regarding carriage of persons other than flight crew;
   4. the operating limitations, specific procedures or technical conditions to be met;
   5. the specific flight test programme (if applicable);
   6. the specific continuing airworthiness arrangements including maintenance instructions and regime under which they will be performed;

c) the substantiation that the aircraft is capable of safe flight under the conditions or restrictions of subparagraph (b);
d) the method used for the control of the aircraft configuration, in order to remain within the established conditions.

(Ref. EASA Part 21A.705)

SIGNIFICANT CHANGES

According to Part 21A.101(b)(1) changes are "significant" if the general configuration or the principle of construction are not retained or the assumptions used for certification of the product to be changed do not remain valid.

The same principles remain valid in classifying changes to the current configuration of an aircraft requiring flight conditions approval and issue of a PtF.

Examples of significant changes are reported under Appendix 1 to GM 21A.101 Fig. 3.

AGENCY

The wording "Agency" is equivalent to EASA.

COMPETENT AUTHORITY

Within the EASA Member States:

a) for a registered A/C, the Authority appointed by the Member State of registry;
b) for an unregistered A/C, the Authority designated by the Member State realising the temporary registration marks.

(Ref. EASA Part 21A.705)

ACRONYMS

AE	Airworthiness Engineer
CPE	Chief Project Engineer
CS-DO	Certifying Staff – Design Organisation
CVE	Compliance Verification Engineer
DO	Design Organisation
DOA	Design Organisation Approval
EASA	European Aviation Safety Agency
FC	Flight Conditions
H/AERON	Head of the Airworthiness Office
ITV	Independent Technical Verifier
PO	Production Organisation
PtF	Permit to Fly
QUA-OS	Quality Experimental Operation
TD	Type Design

1 THE PROCEDURES

1.1 Definition of cases for which Agusta is entitled to use the privileges

In accordance with the privileges granted under Part 21A.263(c)(6) and (c)(7), Agusta as a DOA Holder is entitled:

- to approve the flight conditions under which a permit to fly can be issued in accordance with 21A.710(a)(2) for the purpose defined in the paragraph "Applicability" of this document except for:
  - initial flights of:
    1. a new type of aircraft;
    2. an aircraft modified by a change that is or would be classified as a significant major change; (ref. 21A.101);
    3. an aircraft whose flight and/or piloting characteristics may have been significantly modified.
  - except for permits to fly to be issued for the purpose of 21A.701(a)(15.
- to issue a Permit to Fly (PtF) in accordance with 21A.711(b) for an aircraft Agusta DO has designed or modified, having under control the configuration of the aircraft and attesting the conformity with the design conditions approved for the flight.

NOTE: The grant of these privileges has to be verified in the Terms of approval of the Design Organization Approval Certificate.

1.2 Introduction to the reference documents

In the following is reported a short description about the applicability of the documents:

- document 100-50-197 defines the procedure for definition and approval of FC and issue of a PtF: That document also lists the appointed ITV;
- document 100-50-132 defines how the FC are identified through the report AG Form 59;
- document 100-50-196 defines the procedure for the Risk Assessment;
- document 100-50-180 defines how the experimental aircraft shall be managed by Experimental Operation and Flight Test department;
- document AEQ-P 1632 defines how a production aircraft with deviations to the TD shall be managed as an "experimental aircraft" by the PO Agusta under the responsibilities of DO Agusta, while flying under a PtF issued for the scopes defined in the document 100-50-197;
- document 100-50-179 defines how the external operating base shall be approved by the DO Agusta;
- document 100-50-157 defines how the flight test activities, within the Type Certification Processes, shall be authorized by the relevant CVE declaring that the test will be suitable in order to demonstrate the compliance with the applicable rules.
- the DOA Handbook section C750-02-002 lists the authorized personnel (e.g. CPE, CVE, CS-DO);

- the DOA Handbook section C750-02-003.4 defines the procedure for record keeping.

1.3 Flight Conditions

1.3.1 Definition of the Flight Conditions

For each aircraft, for which a PtF is requested, the CPE is responsible to define the applicable FC according to the document 100-50-197 Part A.

The FC shall include the conditions related to the engines without a type certificate or with unapproved changes. In this case, the installation, the operating conditions, the maintenance programme, the airworthiness and the flight limitations ("*conditions*") are defined and provided to Agusta by the Organisation responsible for the design of the engine (ref. AMC21A.263(b)(1)). In case this does not happen the definition of the FC will be under the Agusta responsibility.

The Flight Conditions are identified through the document AG Form 59 according to 100-50-132.

1.3.2 Determination of the privileges applicability

For each specific case the CPE is responsible to determine the applicability of the privileges according to the criteria defined in paragraph 1.1.

See the document 100-50-197 Part A for the operating procedure and the forms to be used.

1.3.3 Company approval of Flight Conditions under DOA privileges

The CPE is responsible to approve the FC under DOA privileges by signing the EASA Form 18A.

See the document 100-50-197 Part A for the operating procedure.

1.3.4 Agency approval of Flight Conditions

In case of non applicability of the privileges the Office of Airworthiness is responsible to manage the FC Agency approval process.

The Office of Airworthiness shall submit to the Agency the application EASA Form 37 with attached the relevant documentation (EASA Form 18A and document AG Form 59 approved by the relevant CPE).

The Office of Airworthiness shall communicate the Agency approval of the FC to both the competent CPE and CS-DO.

See the document 100-50-197 Part A for the operating procedure.

1.4 Permit to Fly

1.4.1 PtF issue under DOA privileges

The CS-DO is responsible to issue a PtF through the EASA Form 20B under DOA privileges.

See the document 100-50-197 Part B for operating procedure and forms to be used.

1.4.2 Issuance of a PtF by the Competent Authority

In case the privileges are not granted the Office of Airworthiness is responsible to manage the process for getting the Authorities approvals.
The Office of Airworthiness shall submit to the Competent Authority the application on EASA Form 21 enclosing the EASA approved Flight Conditions (Form 18).

The Office of Airworthiness shall forward the original PTF to the competent CD-DO and copy to the competent CPE.

See the document 100-50-197 Part B for operating procedure.

1.5 Management and support activities for FC and Ptf

1.5.1 Permit to Fly duration and continued validity

A PtF is issued for a maximum of 12 months and shall remain valid subject to:

- compliance with the approved flight conditions and any restrictions associated to PtF;
- the aircraft remaining on the same register;
- the PtF not being surrendered or revoked by the original issuing authority (Competent Authority or the DOA itself).

The PtF shall be returned to the issuing authority upon surrender or revocation. In case change of ownership of the aircraft, the PtF is not transferable.
The renewal of the PtF shall follow the same process of the first issue.

1.5.2 Changes

Within its maximum calendar validity, a PtF remains in force until a significant change to FC and/or changes to the related documentations quoted in the PtF are introduced.

Changes affecting the approved FC which affect the justifications already provided for the PtF release, require the repetition of the same approval process, limited to the modifications performed.

1.5.3 Inspections by the Airworthiness Authority

The Airworthiness Authorities (the Competent Authority and the Agency) can perform all the inspections they need. Agusta will provide the access to the aircraft and / or the sites at their request for inspection purposes.

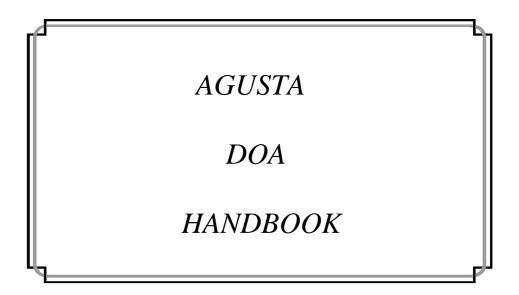
1.6 Record keeping

The documents issued to establish and justify the flight conditions, associated to issue of permits to fly including inspections record, documents supporting the approval of flight conditions and permit to fly itself, are filed by the "Engineering Procedures and Data Management" office in order to keep and provide evidence of the information necessary to ensure the continued airworthiness of the aircraft. These information are available at request to the Agency and the Competent Authority.

See DOA Handbook section C750-02-003.4 and document 100-50-197 for details.

2 THE RESPONSIBILITIES

FUNCTION TASK	CPE	H/AERON	PE	ITV	AE	CS-DO	EPDM
Determination of privileges applicability	R	C					
Company approval of Fight Condition							
□ Definition of the FC	R		S		C		
□ Independent Technical Verification				R			
□ Approval of the FC	R						
□ Record Keeping							R
Approval of the FC by the Agency							
□ Application and Management		R			C		
□ Record Keeping							R
Permit to Fly issued by the Company							
□ Verification						R	
□ Issue of a PtF						R	
□ Record Keeping						R	R
Permit to Fly issued by the Authority							
□ Application and Management		R			C		
□ Record Keeping						R	R

R = Primary Responsibility
S = Support
C = Coordination

PROCEDURE FOR CONTINUED AIRWORTHINESS

DOC. N° C750-02-003.3

ISSUE H **DATE: February 28 , 2011**

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ISSUE STATUS AND APPROVAL

ISSUE	DESCRIPTION	
A	First Issue	Prepared P.G.Colombo Date 1/12/00 Checked P.G.Colombo Date 1/12/00 Approved P.Alli Date 1/12/00
B	Updating of the procedures listed in the Reference paragraph and recalled in the text.	Prepared IPQ Date 20/01/03 Checked P.G.Colombo Date 20/01/03 Approved P.Alli Date 20/01/03
C	Updating of the referenced applicable regulation to EC 1702/2003	Prepared Airw. Office Date 20/01/04 Checked P. G. Colombo Date 20/01/04 Approved P. Alli Date 20/01/04
D	Updating for introduction of the sharing with the Agency of the relevant information for the issue of the Airworthiness Directives	Prepared IPQ Date 06/09/04 Checked P. G. Colombo Date 06/09/04 Approved P. Alli Date 07/09/04
E	Updating of the procedures listed in the Reference paragraph and recalled in the text.	Prepared IPQ Tecnologie Date 20.01.06 Checked G. Gino Date 20.01.06 Approved G.Monti Date 30.01.06
F	Improvement description of Management occurrences process (para 1.2). Updating of the referenced procedures.	Prepared IPQ Tecnologie Date 01/06/07 Checked G. Gino Date 01/06/07 Approved G.Monti Date 01/06/07
G	Introducing the reference to the procedure AQ 13-16 for occurrences and accident reporting to ENAC / EASA..	Prepared IPQ Tecnologie Date 09/07/09 Checked G. Gino Date 09/07/09 Approved G.Monti Date 13/07/09
H	Not significant changes. • Updating of referenced / quoted procedures. • Introducing of HSC and ART committees, • Improvement of process description and clarification of responsibilities and procedures applicability. *Ref. Finds EASA n. F09-007 e - 009.*	Prepared M. Di Noia Date 28/2/2011 Checked G. Gino Date 28/02/2011 Approved F. Nannoni Date 28/2/11

REFERENCES

ICAO Annex 13

EC regulation n. 1702/2003 “Certification of aircraft and related products, parts and appliances and of design and production organizations”

C750-02-003.2A “Procedure for classification and approval of changes to type design”

C750-02-003.6 “Coordination between Design and Production, list of the arrangements”

100-50-140 “Gestione Bollettini Tecnici”

100-50-143 “Gestione – consultazione normativa tecnica nazionale ed internazionale”

AQ 13-04 “Gestione degli Inconvenienti (N.I.) e delle relative Azioni Correttive”

AQ 13-05 “Occurrence reporting and management process”

AQ 13-11 “Process for the reporting and management of accidents and serious incidents”

PRO.SFE.020.96 “Raccolta dei rapporti d’inconveniente ricevuti da Engineering Customer Support ".

PRO.FSE.026.96 “Procedura per la conservazione e distribuzione delle pubblicazioni tecniche”

SCOPE

This document outlines the way in which the DO performs its functions in relation to the continued airworthiness of the product it designs, including co-operation with the PO when dealing with any continuing airworthiness actions that are related to production of the product; and identifies the relevant procedures describing the means by which the DO monitors and responds to problems affecting airworthiness of its product during design, production and in service.

APPICABILITY

This document is applicable by DO when dealing with problems affecting airworthiness of products under its design responsibility.

DEFINITIONS

Continued Airworthiness
Means analysis of the data coming from experience and decision of mandatory corrective action if required.

Accident
An occurrence associated with the operation of an aircraft which takes place between the time any person board the aircraft with the intention of flight until such time as all such persons have disembarked, in which:

a person is fatally or seriously injured or
the aircraft sustains substantial damage or structural failure or
the aircraft is missing or is completely inaccessible
(Ref. ICAO Annex 13)

Incident
An occurrence, other than an accident, associated with the operation of an aircraft which affects or could affect the safety of operation.
(Rif. ICAO Annex 13)

Reportable Occurrence
Any failure, malfunction or defect of which the TC. Holder is aware and that has resulted, or may result in an unsafe condition; such occurrences need to be reported to the Agency
(Ref. Part 21A.3).
Note: Incident, as defined by ICAO Annex 13, is included in the definition of "Reportable Occurrence".

ACRONYMS

ART Airworthiness Review Team
CPE Chief Project Engineer
DO Design Organisation
HSC Helicopter Safety Committee
PO Production Organisation
TC Type Certificate

1 THE PROCEDURE

1.1 Introduction

The continued airworthiness process outlined by this document includes the following activities:

1. management of occurrences;
2. Type Design modifications;
3. instructions to Production Organisation;
4. information to the Agency/Authority;
5. information to Operators;
6. Airworthiness Directives.

1.2 Management of occurrences

It includes the following steps:

a) collection of occurrences from external/internal originators;
b) recording of all occurrences in SAP;
c) classification and identification of unsafe conditions. If unsafe then:
   - reporting to / interface with the EASA / ENAC,
   - investigation and corrective actions identification in case of occurrence resulting from a deficiency in design or in manufacturing.

The Product Support Engineering is responsible for the step a) according to the document PRO.FSE. 020.96 and step b) according to the document AQ 13-05.

The CPE is responsible for the steps c).

The incidents are managed in accordance with the document AQ 13-05.

The accidents and serious incidents are managed in accordance with the document AQ 13-11.

In order to manage matters related to the helicopters Safety and Airworthiness specific bodies are established: the Helicopter Safety Committee (HSC) and the Airworthiness Review Team (ART). See respectively documents AQ 13-11 and AQ 13-05 for details.

Occurrences detected during experimental activity of products under development and Type Investigation, deriving from an insufficient/poor design despite the conformity with the applicable data is confirmed, are managed in accordance with document AQ 13-04 and notified through "Notifica Inconvenienti" (NI) to the competent CPE, who will analyse and classify and manage the event accordingly.

Any person in the Design Organization detecting at a later stage a non compliance to the applicable Certification Basis shall notify in writing (email, fax, memo, etc.) the competent CPE with all available information, for proper action according to AQ 13-05.

1.3 Type Design modifications

Whenever an unsafe deficiency in Type Design has been identified, a Type Design Change related corrective action is investigated, which may lead to develop either a mandatory inspection or a design changes. The relevant documentation modifying hardware, software design and/or maintenance practices as required, to remove the unsafe condition is then prepared.

The document C750-02-003.2A gives details of this process.

1.4 Instructions to production organisation.

The following data and information are made available to the PO:

- Type Design modifications data
- Technical Bulletins
- Data and information on manufacturing deficiencies found by investigation

See the specific DO-PO arrangements listed in the document C750-02-003.6.

1.5 Information to the Agency

The CPE must make sure whether the Agency intend to issue an Airworthiness Directive for the events classified as "unsafe condition" . In this case the CPE is responsible to propose the appropriate corrective action or required inspections, or both, and submit details of these proposals to the Agency for approval. (For details see AQ 13-05 and AQ 13-11).

In particular, for events involving the competence of ENAC (as per AQ 13-05 and AQ 13-11) the competent CPE may be requested to provide the information of the ENAC Form 180 (see Appendix 1).

Only for helicopters certificated in USA the Product Support Engineering provides the MCAI form (see Appendix 2).

1.6 Information to Operators

The appropriate descriptive data and accomplishment instructions for modifications and/or inspections will be made available to all interested people with the issue of Technical Bulletins in accordance with document 100-50-140. These information are make available to the Operators/Owners in accordance with document PRO.FSE.026.96.

Product Support Engineering informs through an Information Letter the Operators/Owners of Agusta products about the system for collecting information of in service occurrences (see PRO.FSE.020.96).

1.7 Airworthiness Directives (AD)

The AD are the documents through which the Agency makes the information to the operators mandatory. The management within the company of the AD is defined by the 100-50-143.

2 RESPONSIBILITIES

The specific responsibilities concerning the process phases are defined in the relevant quoted documents.

APPENDIX 1

MODULO ENAC N.180

pag. 1

ENTE NAZIONALE AVIAZIONE CIVILE (enac)	**PROPOSTA DI EMISSIONE P.A.**

Rif. prot. **del**

1 **Costruttore:**

....

2 **Modelli, numeri di costruzione, part numbers, installazioni e qualsiasi altra informazione necessaria ad identificare in maniera univoca gli aeromobili o le parti interessate:**

....

3 **Problema che ha compromesso le condizioni di impiego sicuro:**

....

4 **Descrizione della causa del problema:**

....

5 **Effetto del problema sulle condizioni di aeronavigabilità dell'aeromobile, nelle diverse condizioni di volo, nel caso non siano adottate azioni correttive:**

....

6 **Circostanze che hanno portato alla individuazione del problema:**

....

7 **Numero delle segnalazioni relative al problema:**

....

8 **Istruzioni/Bollettini di Servizio del costruttore:**

....

9 **Elencare il titolo ed il numero di riferimento di qualsiasi altro documento, sia obbligatorio o raccomandato (inclusi quelli emessi dai subfornitori) necessario per completare le istruzioni dei bollettini di servizio obbligatori:**

....

10 **E' coinvolta una Autorità di Aeronavigabilità straniera?**

....

11 **In caso affermativo riportare quale, ed allegare copia della PRESCRIZIONE DI NAVIGABILITÀ emessa al riguardo:**

....

MODULO ENAC N.180 pag. 2

enac ENTE NAZIONALE AVIAZIONE CIVILE

PROPOSTA DI EMISSIONE P.A.

12 **Specificare il tipo di azione correttiva proposta**
(es. ispezione una tantum, ispezione ripetitiva, modifica, limitazione operativa, etc.):
………..

13 **Scadenza**
Scadenza proposta:
Metodo utilizzato per stabilire la scadenza:
………..

14 **Esiste accordo tra l'ENAC ed il costruttore sulle azioni proposte?**

15 **Se non esiste accordo riportare le cause**

16 **Numero totale degli aeromobili/parti interessati:**

Nel mondo (per prodotti o parti che interessano la FAA riportare il numero negli USA)

17 **Stima delle ore/uomo, per aeromobile o parte, necessarie per eseguire ognuna delle azioni obbligatorie:**

18 **Parti.**
Sono disponibili, al momento, scorte di parti adeguate?

In caso negativo stimare quando saranno disponibili:

Costo approssimativo delle parti per ogni aeromobile:
…………………………………………………………………………………………………

N.B. – I dati di cui ai punti 16, 17 e 18 sono forniti dalla ditta Agusta.

Sistema Direzionale di Milano
Servizio Sicurezza Volo

Riservato alla Direzione SMP

Il Professionale

Proposta accettata

sì ☐ **no** ☐

Protocollo in arrivo

Il Direttore

Il Professionale

Il Direttore

APPENDIX 2

FAA MCAI INFORMATION FORM

AIRCRAFT MANUFACTURER:

AGUSTA S.p.A.
Via G. Agusta, 520
Cascina Costa di Samarate (Varese)
ITALY

MODELS:

ECAA AD/REVISION N°/DATE:

BOLLETTINO TECNICO/REVISION N°/DATE:

Bollettino Tecnico (Alert) n° dated ....

1. **Describe the unsafe condition, and its root cause. Include description of how the problem could affect the safe operation of the helicopter.**

2. **Provide the number and description of occurrences which prompted the A.D.**

3. **What is the compliance time and consequences if extended? What would be considered an appropriate grace period for compliance?**

4. **Cost of parts and/or installation workhours for the owner/operator (data from the manufacturer and their supplier, if applicable).**

5. **If parts are required, are they available for all aircraft?**

6. **What category best describes the cause of the unsafe condition:**

   _____ Design problem _____ Quality control problem _____ Operational

   _____ Maintenance _____ Unapproved parts _____ Other (specify)

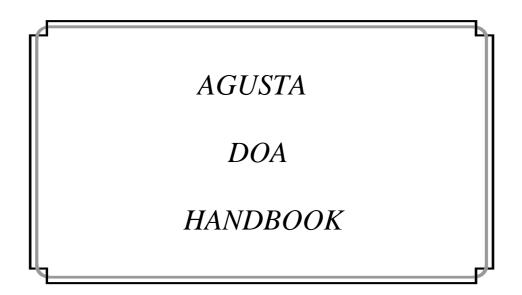
7. **Should a ferry flight be permitted? If no, why not?**

   _____ YES _____ NO

8. **Number of aircraft affected, by model designation and serial number (U.S. registered and worldwide).**

9. **Is further action anticipated to be necessary to correct this unsafe condition? If so, please provide description and recommended compliance time.**

10. **Other:**

    PRODUCT SUPPORT ENGINEERING

PROCEDURE FOR RECORD KEEPING

DOC. N° C750-02-003.4

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ISSUE STATUS AND APPROVAL

ISSUE	DESCRIPTION		
A	First Issue	Prepared P.C.Moscatelli Checked P.G.Colombo Approved P.Alli	Date 01/12/00 Date 01/12/00 Date 01/12/00
B	Updating of the procedures listed in the Reference paragraph and recalled in the text. Introduction of the new Technical Document Management System.	Prepared IPQ Checked P. G. Colombo Approved P. Alli	Date 20/01/03 Date 20/01/03 Date 20/01/0
C	Updating of the referenced applicable regulation to EC 1702/2003 Updating to introduce EASA regulations and standards Minor updating to improve readability	Prepared Airw. Office Checked P. G. Colombo Approved P. Alli	Date 20/01/04 Date 20/01/04 Date 20/01/04
D	Updatings from compliance with EASA Part 21; in particular for introduction of the environmental protection concepts. Introduction of the procedure for management and distribution of Agusta SW.	Prepared IPQ Checked P. G. Colombo Approved P. Alli	Date 06/09/04 Date 06/09/04 Date 07/09/04
E	Updating of the procedures listed in the Reference paragraph and recalled in the text. Minor updating to improve readability	Prepared IPQ Tecnologie Checked G. Gino Approved G. Monti	Date 20/01/06 Date 20/01/06 Date 30/01/06
F	Updating of the referenced procedures Minor updating to improve readability	Prepared IPQ Tecnologie Checked G. Gino Approved G. Monti	Date 01/06/07 Date 01/06/07 Date 07/06/07
G	Updating the reference/name of quoted procedures.	Prepared IPQ Tecnologie Checked G.Gino Approved G.Monti	Date 30/06/08 Date 30/06/08 Date 09/07/08
H	Updating of the reference to Circolare ENAC NAV-57A. Clarifying the Library Department responsibilities.	Prepared IPQ Tecnologie Checked G.Gino Approved G.Monti	Date 09/07/09 Date 09/07/09 Date 13/07/09
I	Not significant changes • Clarifying the Technical Document Management and Record keeping. • Introducing of Appendix 1 • *(Ref. Findings EASA F 10-010, R 10-010, R 10-011)*	Prepared M.Di Noia MDN Checked G.Gino Gino Approved F.Nannoni	Date 28/2/2011 Date 28/2/2011 Date 28/2/11

REFERENCES

EC regulation n. 1702/2003 “Certification of aircraft and related products, parts and appliances and of design and production organizations”

CIRCOLARE ENAC NAV-57A “Conservazione della documentazione relativa alla certificazione dei prodotti omologati e parti”

C750-02-002 “The Design Assurance System”

PRO.FSE.026/96 “Procedura operativa per la conservazione e la distribuzione delle pubblicazioni tecniche”

SIN/95/0360 “Access control to the Printing and Reference Offices”

STD-PR-0121 “Gestione della documentazione per la progettazione e sviluppo di sottosistemi avionici”

- Para 3.2 “Composizione del numero del documento”
- Para 3.3 “Standardizzazione della documentazione”
- Para 4.1 “Identificazione delle unità – generalità”

ER099 “Cards, aperture fields of application and definition”

NTA099R “Requisiti Aperture Card (35 mm)”

AWEOS011 “Panagon user manual”

100-56-005 “Manuale utente DBT”

100-50-017 “Gestione ‘Disegni’ e ‘Software’ imbarcati

100-50-31 “Identificazione dei documenti Agusta e Agusta/licenze su supporto miniaturizzato (microfiches)”

100-50-116 “Gestione documenti classificati”

100-50-143 “Gestione-Consultazione Normativa Tecnica Nazionale ed Internazionale”

100-50-163 “Documenti gestiti dall’Ufficio Aeronavigabilità”

100-50-173 “Design Organisation - Requisiti professionali del Management Staff e del Certifying Personnel”

AWEOP001 “Management of AW Engineering Organization technical documents”

SCOPE

According to PART 21A.55 and .105, all relevant design information, shall be held by the Type Certificate holder at the disposal of the Authority and shall be retained in order to provide the information necessary to ensure the Continued Airworthiness and compliance with the applicable environmental protection requirements of the product.
The intent of this procedure is to provide a description of the recording system and the related responsibilities.

APPLICABILITY

The procedure established in this section of the DOA Handbook is applicable to all the technical documentation related to products for which Agusta is applicant or T.C. holder.

DEFINITIONS

Technical Documents
“Technical Documents” means the set of drawings (combination of graphical representation, part list and engineering change order) and technical reports (specifications, compliance documents, etc) for the design or assistance to the design of air products, or manufacturing.

Drawings issued by Agusta shall be produced and managed in accordance with the 100-50-017 procedure.

Technical reports are produced by the various offices of Engineering Organization and shall be managed in accordance with the procedure AWEOP001.

Classified Technical Documents
“Classified Technical Documents” means documents under restricted disclosure due to corporate or client’s requirements (ref. 100-50-116).

International Technical Standards
“International Technical Standards” means all standards issued by civil organizations (ANSI, AECMA, etc.) or military organizations (DoD, UK DEFENCE, etc.) and regulations issued by aviation Authorities (EASA, JAA, ENAC/RAI, FAA, etc.) dealing with aviation products. These documents are managed in accordance with the 100-50-143 procedure.

Originals
“Originals” means a set of documents in their latest revision from which a copy is made to meet the production requirements or other needs.

Issue of copies
"Issue of copies" means the reproduction on any medium of copies from an original and their distribution to the users.

Automatic/Planned Distribution
"Automatic/Planned Distribution" means the automatic transmittal of a set of documents and their revisions to the corporate functions listed in proper computer managed distribution lists.

Data media
"Data media" means any material on which a technical document may be represented such as transparency, paper, microfilm, magnetic tape, etc.
Said media apply to both originals and copies.

1 ORGANIZATION

1.1 Filing Department

The Filing Department of the "Data Management" office shall be responsible for the collection, storage and historical filing of the whole Technical Documents produced by:

- Agusta;
- Partners (Westland, Eurocopter, etc.);
- Licensors (Bell, Sikorsky, Boeing etc.);

The Filing Department is a restricted area subject to the corporate safety procedure SIN/95/0360, located in the basement of the DO main building. See C750-02-002 App. 4.
It is equipped with all the features (smoke detector, air conditioning, restricted access, closed filing cabinet) necessary to guarantee proper record keeping with respect to environment, accidental damage, loss or robbery.

1.2 Library Department

The Library Department of the "Data Management" office shall be responsible for the collection, management Technical Documents according to this procedure. It is located on the ground floor of the DO building. See C750-02-002 Appendix 4.

- TECHNICAL DOCUMENTATION PRODUCED BY THE COMPANY
  - Agusta's and Partners' Technical Reports
  - Lincesors's Technical Reports
  - Company's and Licensors' Technical Standards
  - Master of the Flight Manual and Maintenance Manual (Cap. 4 and 5), as attachment to the relevant MAF
  - Master of the technical bulletins, as attachment to the relevant technical report

- REGULATIONS FROM AVIATION AUTHORITIES
  - EASA (EC regulations, Certification Specifications, Airworthiness Directives (AD), etc.) are available through EASA website
  - ENAC/RAI (Regolamento Tecnico, Circolari, Prescrizioni di Aeronavigabilità (PA), etc.) are available through ENAC website
  - JAA Joint Aviation Requirements (JAR) and FAA Federal Aviation Regulations (FAR) are both available through the relevant website and IHS.

  See also the procedure 100-50-143.

- STANDARDS AND STANDARD SPECIFICATIONS
  - Documentation according to the 100-50-143 procedure

1.3 Reproduction Department

The Reproduction Department of the "Data Management" office shall be responsible for the reproduction and distribution (by means of adequate equipment) of the whole Technical Documents (drawings, reports, specifications, etc.) produced by the Technical Management .
It is located in the basement of the DO main building. See C750-02-002 App.4.
It is equipped with of all the features (smoke detector, air conditioning, restricted access, closed filing cabinet) necessary to guarantee proper keeping with respect to environment, accidental damage, loss or robbery.

2 TECHNICAL DOCUMENT MANAGEMENT

2.1 Technical Document Storage

The technical documents shall be stored in a proper place to ensure the best storage and protection against loss and damage (theft, fire, etc.) and traceability over time, the following technologies are used:

- paper (transparency, paper)
  - in folders up to A4 size
  - in drawer file cabinets up to A1 size
  - in roll file cabinets over A1 size
- 35mm microfilm (aperture card)
  - in rotating cabinets and/or drawer cabinets for ease of reference
- microfiche (jacket)
  - in drawer cabinets for ease of reference
- magnetic tape/disk
  - the CAD-, (CADAM- or CATIA)-aided drawings are stored in the HOLD libraries.
  - The ICT Department shall be responsible to perform a periodic back-up of the Hold libraries on a magnetic tape.
  - These tapes are always stored by the ICT Department.

2.2 Historical filing / Record Keeping

The “Data Management” office shall keep record of any document produced by the company by means of suitable data processing systems.

The data processing systems used shall include:

- For the Drawing set:
  “ARCHIVIO DISEGNI” run on the main processor through CICS System , transaction “T1DB”, according to the 100-56-005 procedure.
- For technical reports, etc:
  “Panagon” document management system, available in the Agusta network (see AWEOP001 and AWEOS011).

For all the documents (except for drawings), the filing is divided into paper and historical filing (see AWEOP001):

- The paper filing consists of retaining the front sheets with the original signatures.
- The historical filing shall be carried out by means of
  - microfiches, according to the 100-50-31 procedure;
  - magnetic disk, created automatically when the document is loaded in the document management system. The electronic backup is carried out by the Local ICT Department.

For the Drawing set (DBT, graphical representation, EO/ECO), a 35mm microfilming (aperture card) shall be carried out (see 100-50-017) according to the procedures below:

- NTA099R for the Agusta and Agusta/Licenses product lines
- ER099 for EH101

2.3 International Technical Standard Management

The “Data Management” office shall be responsible for managing the international technical standards. For this purpose, this office shall rely on the cooperation with the IHS Co. (Information Handling Service) with which it has signed a regular contract that is yearly renewed. The management activity shall be carried out in accordance with the 100-50-143 procedure.

2.4 Classified Technical Documents

Classified Technical Documents shall be classified and managed in accordance with the procedure 100-50-116.

2.5 Distribution

The first issue technical documents and their revisions shall be distributed in accordance with procedure AWEOP001 for the reports and 100-50-017 for the drawing set.

2.6 Reference to the International Technical Standards

The international Technical Standards is available in the Agusta network (see 100-50-143).

2.7 Check of the technical document revision status

The users shall prior to the application of any technical document (drawings, reports, specifications, procedures, etc.) check for its revision status to be sure that the latest revision of the document is applied.

N.B. This shall be true for the process specifications, the material standards and any other document referred to in the drawings.

The data processing system to be used shall be:

- for the drawings “ARCHIVIO DISEGNI” run on the main processor through “T1DB”;
- for all other documents except for drawings and International Technical Standards run on “Panagon” system (ref. AWEOS011);
- for the International Technical Standards run on the IHS System (ref. 100-50-143).

2.8 Storage time

The technical documents shall be stored as long as the last aircraft they refer to remains in service (ref. Circolare ENAC NAV-57A).
Adequate and effective equipment shall always be available for ease of reference of any type of material (paper, aperture card, data media, etc.).

3 RESPONSIBILITY

The "Data Management" office is responsible, in accordance with this manual, for the management and distribution of all the technical documents relating to the product lines of Agusta, Agusta Licensors and Partners as well as of the design technical documents, and for management and distribution of Agusta generated software (ref. 100-50-017).

The Filing Department of the Frosinone-based facility is responsible of the management of the drawings for the AB47, AB206, 412-010, 412-015 and 412-018 lines following the same methods as described in this manual.
Through the transaction "T1BD" according to the 100-56-005 procedure; it is always possible to identify the location of the drawing.

The "Airworthiness" office is responsible for the management and record keeping for all the civil products of the relevant certification files both in Europe and abroad, both of new types and changes to the approved type design in accordance with the procedure n. 100-50-163.

The "Engineering Licences & Support" function is responsible for the management and distribution of the:

- Flight Manual
- Instruction for continued airworthiness (Maintenance Manual, etc.)
- Technical bulletins

in accordance with the PRO.FSE.026.96 procedure agreed with the Design Organization.

The HDO keeps personal record of the appointed personnel (ref. 100-50-173).

The HDO keeps record of the Type Certificates held by the Agusta Design Organization.

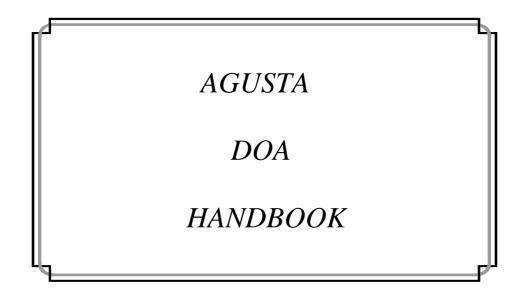
APPENDIX 1

Classification of document recorded by the Record Keeping

The following table reports the classes of documents that are recorded by the Record Keeping of the DO, according with the report type identification table of AWTR003 procedure, par.6.5.

The table identifies the belonging of each class to the Type Design Definition Document and to the Compliance Document Data Set. Reference procedures for document management are here reported, together with the filing system where each document is stored.

Class of Documents	Type Design	Showing of Compliance	Ref. Procedure	Filing Systems
Drawings (incl. SCDs & ICDs)	Y	N	100-50-017	DBT + servers + aperture cards
ATP/ATR (Cod. D)	Y	Y	100-50-195	PANAGON
Technical Spec.(Cod.E)	Y	Y	100-50-165	PANAGON
Vendor Item List	N	N	100-55-023	PANAGON
Configurazione Produttiva	N	N	100-55-022	PANAGON
Critical Part List	N	Y	100-55-002	PANAGON
MMEL	N	N	100-55-021	PANAGON
Rotorcraft Flight Manuals	N	N	PRO.FSE.26.96 (available in Intranet COS)	Agusta Product Support Web Site MAF in PANAGON
Rotorcraft Maintenance Manual	Y (Airworth. limit. Only)	N	PRO.FSE.26.96 (available in Intranet COS)	Agusta Product Support Web Site MAF in PANAGON
Notification of Design Change	Y	Y	C750-02-003.2A	PANAGON
Process Specifications (STA-AWPS)	Y	N	AWEOS004	PANAGON
Design Specifications (STAP-AWDPS)	Y	N	AWEOS005	PANAGON
Product Specifications (SAP-AWPAS)	Y	N	AWEOS006	PANAGON
Control Specifications (SRA – AWIS)	Y	N	AWEOS003	PANAGON
Material Specifications (AWMS – 199 – WHMS)	Y	N	AWEOS008	PANAGON
Technical Rules (NTA)	Y	N	AWEOS009	PANAGON
Airworthiness Documents (Cod.A)	Y	Y	100-55-021	PANAGON
Interface Ctrl Docs (Cod.I)	Y	N	100-55-021	PANAGON
Process and Stiffness Eval. (Cod.J)	Y	Y	100-55-021	PANAGON
Aerodyn. , Dyn., & Hidrodyn. Data (Cod.K)	Y	Y	100-55-021	PANAGON
Load Charts (Cod.L)	Y	Y	100-55-021	PANAGON

Class of Documents	**Type Design**	**Showing of Compliance**	**Ref. Procedure**	**Filing Systems**
Maintainability (Cod.M)	Y	Y	100-55-021	PANAGON
Qualification / Compliance (Cod.N)	Y	Y	100-55-021	PANAGON
Project Definition (Cod.P)	Y	Y	100-55-021	PANAGON
Aircraft Specification (Cod.Q)	Y	Y	100-55-021	PANAGON
Reliability (Cod.R)	Y	Y	100-55-021	PANAGON
Stressing (Cod.S)	Y	Y	100-55-021	PANAGON
Task Proposal (Cod.T)	Y	Y	100-55-021	PANAGON
System Spec. (Cod.U)	Y	Y	100-55-021	PANAGON
Weight Statement (Cod.W)	Y	Y	100-55-021	PANAGON
Std Spec. and Procedures (Cod. Z)	Y	Y	100-55-021	PANAGON
Quality Procedures/Instructions 100-5X-YYY / AWEOP,D,S,G	N	N	AWEOS001	PANAGON
FAI Reports	Y	Y	100-55-014	PANAGON
Design Review Reports	N	N	100-50-125	PANAGON
DDP	Y	Y	100-55-014	PANAGON
ETI	N	N	NTA053R	PANAGON
Spec. Change Notes	Y	Y	100-50-167	PANAGON
Released SW	Y	Y	100-50-017/05	PANAGON
Standards	Y	Y	AWEOS002	PANAGON
Feasibility Studies (Cod.B)	N	N	100-55-021	PANAGON
Doc.s for contract req. /SOW/DRL	N	N	100-55-021	PANAGON
Compliance Statements	Y	Y	100-55-021	PANAGON
QTP/QTR	Y	Y	100-55-021	PANAGON
Bollettini Tecnici	N	N	100-50-140	PANAGON
CCL	Y	Y	100-55-021	PANAGON
NTR	N	Y	PRO.FSE.19.96 (available in Intranet COS)	PANAGON
Material Qualification Reports	N	N	N/A	PANAGON
Lab. Reports	N	N	N/A	PANAGON

PROCEDURE FOR EQUIPMENT QUALIFICATION

DOC. N° C750-02-003.5

ISSUE H **DATE: February 28, 2011**

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ISSUE STATUS AND APPROVAL

ISSUE	DESCRIPTION		
A	First Issue	Prepared P.G.Colombo Checked P.G.Colombo Approved P.Alli	Date 01/12/00 Date 01/12/00 Date 01/12/00
B	Updating of the procedures listed in the Reference paragraph and recalled in the text. Introduces new abbreviations.	Prepared IPQ Checked P.G.Colombo Approved P.Alli	Date 20/01/03 Date 20/01/03 Date 20/01/03
C	Updating of the referenced applicable regulation to EC 1702/2003	Prepared Airworth. Office Checked P.G.Colombo Approved P.Alli	Date 20/01/04 Date 20/01/04 Date 20/01/04
D	Updatings from compliance with EASA Part 21; in particular for the introduction of the environmental protection concepts.	Prepared IPQ Checked P. G. Colombo Approved P. Alli	Date 06/09/04 Date 06/09/04 Date 07/09/04
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F	Updating of the para 2.1. for introducing the reference to the procedure IQ S015. Updating of the referenced procedures	Prepared IPQ Tecnologie Checked G. Gino Approved G. Monti	Date 01/06/07 Date 01/06/07 Date 07/06/07

ISSUE	DESCRIPTION	
G	Updating the reference/name of quoted procedures.	Prepared IPQ Date 30/06/08 Checked G.Gino Date 30/06/08 Approved G.Monti Date 09/07/08
H	Not significant changes: • Updating of referenced procedures.	Prepared M. Di Noia Date 28/2/2011 Checked G.Gino Date 28/02/11 Approved F. Nannoni Date 28/2/11

REFERENCES

EC regulation n. 1702/2003 “Certification of aircraft and related products, parts and appliances and of design and production organizations”

AWEOP002 “Signing of technical documents”

100-55-023 “Vendor Item List ”

100-50-148 “Gestione delle parti ‘classificate’”

100-50-153 “Procedura per la gestione della Dichiarazione dello stato di rispondenza (DDP) durante la fase di sviluppo e preserie”

100-50-157 “Ispezioni e prove nei processi di Certificazione Civile”

100-50-165 “Procedura per la definizione e compilazione delle specifiche tecniche e source control drawing per parti di fornitura esterna”

100-50-176 “Conformità alle norme di aeronavigabilità e programma di omologazione.

Modalità di preparazione e gestione dei documenti relativi”

C750-02-003.1 “Type Investigation Procedure”

C750-02-003.2A “Procedure For Classification And Approval Of Changes To Type Design”

C750-02-003.7 “Procedure For Qualification of Subcontractors”

C740-15 “Arrangement DO – PO”

IQ S015 “Requisiti di Qualificazione e Assicurazione Qualità per i Fornitori di Equipaggiamenti durante le fasi di progetto e sviluppo”

SCOPE

Based on Part 21.A239, it is required that methods have to be established for the acceptance by Agusta Design Organisation of the parts/appliances designed by subcontractors.
This section of the Handbook has the scope to establish the procedures to be applied for the qualification process of parts or appliances designed by subcontractors.

APPLICABILITY

This procedure is used to establish acceptability of equipment and is applicable to equipment, designed and manufactured by a Subcontractor, for which the qualification process is conducted against the requirements contained in a Procurement Specification (or other equivalent document) issued by Agusta.

The qualification process is conducted in conjunction with Type Certification process (C750-02-003.1) or in conjunction with the approval process of a Change to Type Design (C750-02-003.2A).

Equipments which holds a European TSO or an other type certification recognized in Europe, (e.g. FAA TSO) do not need to be qualified in accordance with this procedure.
For the installation on the helicopter of equipments covered by a TSO, Agusta is responsible to verify and demonstrate that:

- the relevant TSO is acceptable in relation to the certification basis adopted for the helicopter (or the change of the helicopter);
- the equipment is installed according to the instructions and limitations imposed by the manufacturer of the equipment;
- the helicopter, with the equipment installed, is compliant with the certification basis and applicable environmental protection requirements.

DEFINITIONS

Part or appliance
Means any instrument mechanism, equipment, part, apparatus, appurtenance, or accessory, including communications equipment, that:
- is used or intended to be used in operating or controlling an aircraft in flight;
- is installed in or attached to the aircraft and includes parts of an airframe, engine or propeller;

It is intended that software is covered by the above definition.

Qualification
Process which enables demonstration that a part satisfies the requirements specified in a Technical Specification.

Note: in the Agusta System this Document is identified as Procurement Specification or Source Control Drawing.

Subcontractor
For the purpose of this procedure, Subcontractor is an Organisation which furnish to Agusta a part or appliance, to be installed on the helicopter, designed and manufactured by that Organisation, in accordance with the Procurement Specification issued by Agusta.

Note: hereafter in this Procedure "Equipment Qualification" is used as synonymous of Part/Appliance Qualification taking into account the above definitions.

ACRONYMS

AA: Airworthiness Authority
BOE: Bought Out Equipment
Note: BOE is used in this Procedures as abbreviation to indicate parts/appliances designed by subcontractors
CB: Certification Basis
CVE: Compliance Verification Engineer
DDP: Declaration of Design and Performance
FAI First Article Inspection
PS: Procurement Specification
QTP: Qualification Test Plan
QTR: Qualification Test Report
SC: Subcontractor
SCD: Source Control Drawing
Note: For the purpose of this procedure, PS and SCD are synonymous, being the differences between the two documents limited to the relevant formats.
TA: The Agusta Technical Area in charge of the equipment management and qualification
TCH: Type Certificate Holder
VIL. Vendor Item List

1 THE PROCEDURES

The qualification process for an equipment includes the following steps:

- issuance of the Vendor Item List;
- selection of the Subcontractor;
- issuance of Procurement Specification (Comprehensive of the Quality requirements);
- equipment approval;
- equipment classification;
- categorisation of the qualification processing;
- conduct of qualification activities;
- issuance of Declaration of Design and Performance;

1.1 Vendor Item List

The VIL is a document listing all equipment and relevant subcontractors, approved for the installation on a new helicopter type or as part of a change to an helicopter type.
This document is used as a master record during certification process to record the approval status of the equipments to be installed on the helicopter.
The contents, compilation and management of the VIL are the subject of the procedure 100-55-023 report which is considered complementary to this Section.
The CPE is responsible to issue and maintain the VIL of the relevant product line.

1.2 Selection of the Subcontractor

Based on preliminary evaluations carried out on the technical know-how and organisational characteristics of the candidate Subcontractor (in general and specifically on the equipment to be designed and qualified) and taking into account the activities described in C750-02-003.7 Agusta through the Purchasing Department will make a choice of the Subcontractor to which entrust the design and qualification of the concerned equipment.
See C740-15 for interfaces between the Agusta Design Organisation and the Agusta Production Organisation of which the Purchasing Department is part of.
Procedures related to the selection and qualification of the Subcontractors are the subject of C750-02-003.7.

1.3 Issuance of the Procurement Specification (or Source Control Drawing).

The PS is issued, once the SC has been chosen, in order to establish all technical requirements to be satisfied by the SC through the qualification process of the equipment.
Detailed instructions for compilation of the PS are contained in the applicable Report 100-50-165.

- Cover Page:

The Cover Page signatories are at least the same as provided for a Compliance report.
See 100-50-176 and AWEOP002for details.

- Contents:

The main contents of the PS are:

Design and Construction Standards.

Applicable Certification Specification and environmental protection requirements both through direct reference and the description of their content.

Part Criticality with the definition of the critical function and related applicable requirements see also para 1.5.

Qualification Program.

NOTE: where software is used the PS must contain the criticality level to which qualification is to be conducted.

Source Control Drawing (SCD)

A Source Control Drawing is used as a document equivalent to the PS for simple cases where the issuance of a PS is not considered to be appropriate; typically it applies to parts and equipments already available from one or more source, which anyway need to be covered by Agusta responsibility as TCH and submitted to a qualification process.

The SCD contains requirements for the part identification criticality and qualification program.
See 100-50-176 for details.

1.4 Equipment Approval

This activity is associated with a Type Certification or with a modification to a type design, therefore procedures and responsibilities described in C750-02-003.1 and C750-02-003.2A apply only.
Request for approval of equipment is addressed to the Airworthiness Authority in charge for the aircraft certification/approval, and copied to the AUTHORITY Office or foreign Airworthiness Authority in the Area where the SC is located. The PS is attached to the submission.

In relation to the procedures applicable to a program, the submission may also cover the witness of manufacturing of parts. This will be agreed on a case by case basis with the AA.

1.5 Equipment Classification

Depending on the criticality of the equipment in respect of airworthiness aspects the equipment will be classified in one of the following classes:

Class 1: equipment whose failure may cause or contribute to a malfunction of the system which could prevent safe continuation of the flight or safe landing (catastrophic failure) or significantly reduce the capability of the aircraft or the ability of the crew to face adverse operating conditions (hazardous failure condition).

Class 2: equipment whose failure may cause or contribute to a system malfunction which could reduce the capability of the aircraft or the ability of the crew to face adverse operating conditions (major failure condition).

Class 3: all the equipment not classifiable under Class 1 or Class 2.
(For further details see AMC 23.1309 or AMC 25.1309).

A proposal of classification will be made by Agusta at the moment of submission to the AA.
See reports 100-50-148 for critical parts identification and qualification.
Classification of the equipment will be subject to discussion and agreement with the AA during specialists meetings or Interface panels; Justification documents (e.g. hazard assessment) will be supplied to the AA as appropriate.

1.6 Categorisation of Qualification Processing

While addressing the classification of the equipment, an agreement with the AA Team will also be pursued on the type of processing to be applied to each equipment by choosing one of the following three procedures:

Procedure 1: Before starting the qualification process the Procurement Specification needs to be approved by the AA Team in the contest of TC process or by the AA Specialist in charge of conducting the approval process of a type modification.
All the phases of qualification process need to be agreed in advance by the AA representatives.
AA witnessing of qualification tests will be established according to a programme agreed between Agusta and AA.

Procedure 2: The PS, the documents Showing Compliance with the PS and the DDP are to be sent to the AA.
All other information relative to the qualification process are kept in the Agusta files and made available to the AA upon request.

Procedure 3: The qualification of the equipment is granted through approval of the aircraft system and its installation. The relevant documents are kept in the DO files and made available to the AA upon request.

Usually the above mentioned Procedures are applied respectively to Class 1, 2 and 3 equipments in some cases, the choice of the Procedure may be made in a different way taking into account, the incidence of other factors in addition to the class of the equipment such as:

- previous experience on the equipment functioning on other certified helicopters;
- TSO approval for the equipment;
- the novelty of technology used for the production of the equipment;
- the privileges associated with DOA.

1.7 Conduct of Qualification activities

Unless otherwise formally agreed, the SC is responsible to conduct all the activities necessary for showing compliance with all requirements contained in the Procurement Specification. This include:

- issuance of manufacturing documents, performing of FAI, release of certificate of conformity;
- issuance of analytical reports (stress analysis, fatigue evaluation, failure analysis, EMC analysis, etc.);
- testing (including environmental tests, functional tests, endurance tests, structural tests, etc.);
- issuance of detailed Test Proposal (QTP) and test Result Reports (QTR) (including information on the test article configuration and conformity);
- direct liaison with the local AA Offices for their test witnessing (as applicable);
- to support, as appropriate, Agusta during discussions/ meeting with AA;
- issuance of DDP.

Agusta maintain all the responsibilities assigned by Part 21 to the T.C. Holder; this includes the following:

- liaison with the AA Team (according to the Procedure contained under C750-02-003.1 and C750-02-003.2A);
- verification by CVEs of all technical documents issued by the SC which contain demonstration of compliance with the Certification Specification and environmental protection requirements identified in the “Compliance Assessment” Section of the PS;
- the TA in charge for the equipment, is responsible for Agusta tasks arising from the liaison and relationship with the SC, including approval of QTR and direct participation to qualification activities carried out by the SC.

  Note: In order to ensure traceability of verification approval and record keeping, all the documents produced by the Subcontractor that show compliance with the Certification Specification and environmental protection requirements, are included in an Agusta technical report.

For details of the Agusta verifications on the Subcontractors activities, see report n° 100-50-157.
The Agusta responsibilities can be partially discharged with reference to the kind of the subcontractor approvals. See C750-02-003.7
In accordance with Part 21A.33 allowance is given to the Authority to carry out inspections and participate to ground and flight test at the extent they judge appropriate for its verification function and for checking the validity of the Declaration of compliance issued by the HDO under Part 21A.20(b).

1.8 Issuance of Declaration of Design and Performance

The DDP is a synthetic document used for assessing that the equipment complies with the Procurement Specification (or the Source Control Drawing) and to declare its performances and any limitation established both pertaining to the design and in relation to the operating environmental conditions compatible with the airworthiness requirements applicable to the helicopter on which it is installed.
The DDP is issued and signed by the responsible Technical Manager of the SC and approved by Agusta.
See 100-50-153 for details related to the DDP.

1.9 Modifications

Any modification to an equipment already qualified for installation on the helicopter may affect the original qualification and approval process.

Agusta is responsible to notify the AA of any change being introduced to an equipment and reactivate the qualification process through the following steps:

- agreement with the SC on the nature and classification of the change;
- updating of the PS, the VIL and application to the AA in accordance with the procedure applicable to the approval of changes to type design;
- reassessment of equipment classification and choice of the Qualification Procedure;
- conduct by the SC of the qualification activities;
- updating of DDP.

Procedure and responsibilities for AA approvals of mods to Type design apply to this case (See C750-02-003.2A).

1.10 Approval effectiveness

Due to the specificity of technical requirements and test program, addressed to the approval for installation on a specific product (or change of a product), an equipment approved in conjunction with the type certification process (or change approval process) can be installed, without further investigations, only on the helicopter (or a change of the helicopter) for which the equipment has been designed and approved.

1.11 Recording

The CPE Office is responsible to keep and maintain up to date the VIL.
All documents relevant to the qualification activities are organised and filed in accordance with C750-02-003.4

2 THE RESPONSIBILITIES

2.1 The share of responsibility between Agusta and the Subcontractor

- The Subcontractor is responsible towards Agusta:

  to carry out investigations and issue technical documents as necessary to demonstrate compliance with the requirements established in the Procurement Specification;

  to liaise with the local AA, in accordance with a program agreed with Agusta, and to support Agusta in the discussions for aircraft certification;

  to issue a Declaration of Design and Performance (DDP).

The document that defines the mandatory Qualification and Quality Assurance Requirements for Suppliers of systems/equipment for Agusta helicopter is the procedure IQ S015.

- Agusta is responsible:

  to define specifications which are compatible with the applicable Certification Specification and environmental protection requirements;

  to confirm equipment compliance with specifications requirements (usually via the approval of the DDP);

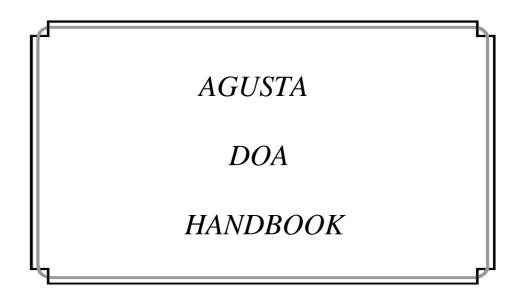
  to provide the AA with the proof of demonstration of compliance with the Certification Specification and environmental protection requirements of the whole helicopter with the equipment installed on it.

2.2 Responsibilities within Agusta

Responsibilities associated to the equipment qualification process are defined as follows:

TASK	**Responsible Function and level of responsibility**	
	R	**S**
Issuing and updating of the complete Vendor Items List (VIL)	CPE	Airworthiness Office
Selection of Subcontractor	Procurement Department	Technical Area
Stipulation of Purchase Order	Procurement Department	Technical Area
Liaison with the Subcontractor and coordination of related tasks	Technical Area	Airworthiness Office
Issuing of Procurement Specification	CPE	Technical Area and CVEs, Airworthiness Office
Submission to the AA and relevant coordination	Airworthiness Office	-
Equipment classification	CPE	Technical Area
Categorization of Qualification Process	Airworthiness Office	Technical Area
Approval of technical documents issued by the Subcontractor for showing of compliance with the PS under Agusta cover	Agusta design department and signature according to the Agusta procedure for signature of docs	-
Verification of compliance with helicopter Certification Basis through technical documents issued by the SC and participation to SC qualification activities	CVEs	-
Approval of DDP	Technical Area and Quality	-

R prime responsibility

S secondary responsibility

COORDINATION BETWEEN DESIGN AND PRODUCTION

LIST OF THE ARRANGEMENTS

DOC. N° C750-02-003.6

ISSUE J **DATE: February 28, 2011**

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ISSUE STATUS AND APPROVAL

ISSUE	DESCRIPTION	
A	First Issue	Prepared P.G.Colombo Date 01/12/2000 Checked P.G.Colombo Date 01/12/2000 Approved P.Alli Date 01/12/2000 A. Cajelli Date 01/12/2000
B	Updating of the procedures recalled in the text. Clarification on documentation for test article delivery between company facilities	Prepared IPQ Date 20/01/03 Checked P.G.Colombo Date 20/01/03 Approved P.Alli Date 20/01/03 A. Cajelli Date 20/01/03
C	Updating of the referenced applicable regulation to EC 1702/2003 Updating of the procedures quoted in the text.	Prepared Airw. Office Date 20/01/04 Checked P.G.Colombo Date 20/01/04 Approved P.Alli Date 20/01/04 A. Cajelli Date 20/01/04
D	Updating from compliance with EASA Part 21; in particular for the introduction of the environmental protection requirements	Prepared IPQ Date 06/09/04 Checked P. G. Colombo Date 06/09/04 Approved P. Alli Date 07/09/04
E	Updating of the reference/name of quoted procedures.	Prepared IPQ Tecnologie Date 20.01.06 Checked G. Gino Date 20.01.06 Approved G. Monti Date 30.01.06
F	Updating of the procedure references quoted in the text. Updating of the text to improve readability.	Prepared IPQ Tecnologie Date 01/06/07 Checked G.Gino Date 01/06/07 Approved G.Monti Date 07/06/07
G	Updating of the procedure references quoted in the text. Introducing of the requirements about special agreement between Agusta PO and a Supplier with an EASA PO approval.	Prepared IPQ Tecnologie Date 20/11/07 Checked G.Gino Date 20/11/07 Approved G.Monti Date 20/11/07

ISSUE	DESCRIPTION			
H	Updating of the procedure references quoted in the text.	Prepared	IPQ Tecnologie	Date 30/06/08
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I	Updating of the procedure references quoted in the text.	Prepared	IPQ Tecnologie	Date 01/06/07
		Checked	G.Gino	Date 01/06/07
		Approved	G.Monti	Date 06/06/07
J	Not significant changes. • The content of the previously issue of this section "Coordination between Design and Production" has been extracted and transferred in the document C740-15. • This section has been updated in order to list all the arrangements stipulated between the Agusta DO and different POs.	Prepared	M. Di Noia	Date 28/2/2011
		Checked	G.Gino	Date 28/2/2011
		Approved	F.Nannoni	Date 28/2/11

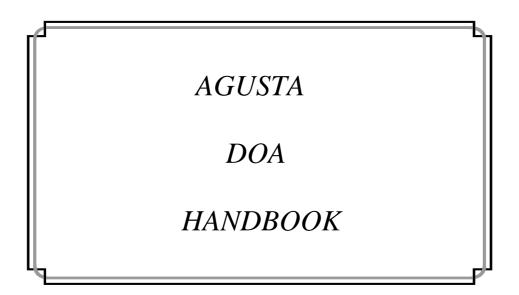
SCOPE

These documents list the arrangements stipulated between:
- the Design Organisation (DO) and the Agusta Production Organisation (PO);
- the DO and other POs;

in order to ensure proper co-ordination between the two functions, Design and Production in compliance with EC regulation n. 1702/2003 “Certification of aircraft and related products, parts and appliances and of design and production organizations” Part 21 paragraph 21A.4.

The mentioned co-ordination is necessary in view of achieving the following objectives:
a) correct and timely transfer from DO to PO of the applicable design data so as to enable PO to accomplish manufacture of product, parts and appliances in conformity with the applicable design data;
b) assurance conformity of the parts to be used for the type investigation and it’s qualification status;
c) assistance from PO to DO and vice versa in dealing with continuing airworthiness and environmental protection matters and relevant actions.

LIST OF AGREEMENTS

Production Organization	Document n.	Title
Agusta Spa	C740-15	Arrangement DO - PO
Agusta Aerospace Corporation	A.A.C. - 003	Coordination between Agusta Spa as Type Certificate Holder and Agusta Aerospace Corporation as Production Organisation

PROCEDURE FOR

QUALIFICATION OF SUBCONTRACTORS

DOC. N° C750-02-003.7

ISSUE G **DATE: February 28, 2011**

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ISSUE STATUS AND APPROVAL

ISSUE	DESCRIPTION	
A	First Issue	Prepared P.G.Colombo Date 01/12/00 Checked P.G.Colombo Date 01/12/00 Approved P.Alli Date 01/12/00
B	Improvements in the wording Added the reference to 100-50-157	Prepared IPQ Date 20/01/03 Checked P.G.Colombo Date 20/01/03 Approved P.Alli Date 20/01/03
C	Updating of the referenced applicable regulation to EC 1702/2003	Prepared Airw. Office Date 20/01/04 Checked P.G.Colombo Date 20/01/04 Approved P.Alli Date 20/01/04
D	Updatings from compliance with EASA Part 21; in particular for introduction of the environmental concepts and he consequences of the absence of DOA JB in the Part 21.	Prepared IPQ Date 06/09/04 Checked P. G. Colombo Date 06/09/04 Approved P. Alli Date 06/09/04
E	Updated references to lower level procedures and related updatings.	Prepared IPQ Tecnologie Date 20/01/06 Checked G. Gino Date 20/01/06 Approved G. Monti Date 30/01/06
F	Introduction of paragraph 1.4 “Agusta Subcontractors list” for the approval status of the Agusta subcontractors	Prepared IPQ Tecnologie Date 30/06/08 Checked G. Gino Date 30/06/08 Approved G. Monti Date 09/07/08

ISSUE	DESCRIPTION	
G	Not significant changes: • Updating of referenced procedures.	Prepared M. Di Noia Date 28/2/2011 Checked G. Gino Date 28/2/2011 Approved F. Nannoni Date 28/2/11

REFERENCES

EC regulation n. 1702/2003 “Certification of aircraft and related products, parts and appliances and of design and production organizations”

C750-02-003.3 “Procedure for Continued Airworthiness”

C750-02-003.5 “Procedure for Equipment Qualification”

QRS01 “Quality Requirements for Suppliers”

AQ 06-01 “Suppliers Quality System approval process”

AQ 06-12 “Monitoring process of suppliers”

100-50-157 “Ispezioni e prove nei processi di certificazione civili”

IQ S015 “Qualification and Quality Assurance Requirements for Suppliers of Equipment during design and Development Phases”

C740-12 “Agusta suppliers list”

C740-15 “Arrangement DO – PO”

SCOPE

The scope of this procedure is to describe the methods applied by Agusta in establishing to its own satisfaction and to the satisfaction of the Authority, the acceptability of the tasks performed by a Subcontractor, that is in charge to design a part or appliance to be installed on an Agusta helicopter subject to a Type Certification process.
Further to their capability in design activity this document addresses the characteristics of the Design Assurance (or Quality) System to be established in the SC organisation. From this point of view the level of the SC Design Assurance System may range form a top level identified in their status of DOA holder, to some lower levels associated to the size of the organisations, the complexity of technology involved in their activities etc. Usually subcontractors in charge to design a part or appliance are also responsible for their manufacturing.
The Agusta Production Organisation procedures apply for the Qualification of Subcontractors under the latter perspective. See AQ 06-01 and AQ 06-12.

APPLICABILITY

This procedure is applicable to organisations (Subcontractors) which have the capability to design parts or appliances, to be installed on Agusta helicopters, on the basis of technical requirements established by Agusta in a Technical Specification.

DEFINITIONS

Subcontractor
For the purpose of this Section of the Handbook, Subcontractor is an Organisation which supplies to Agusta, holder of the relevant Helicopter Type Certificate technical documents and in most cases the hardware/software related to a project of their design in accordance with an Agusta Specification.
For the purpose of this procedure the Subcontractors are classified as Class 1, Class 2 or Class 3:

Class 1 – Subcontractor: SC holder of DOA under Part 21 Subpart J.

Class 2 – Subcontractor: SC which doesn't hold a DOA but that has a Design Assurance System, suitable to satisfy the set of Qualification Requirements established under paragraph 1.2.2.

Class 3 – Subcontractor: SC that cannot be classified either as Class 1 or Class 2.

(Class 1 and Class 2 Subcontractor are referred to as Agusta S.p.A. Class A supplier in doc. QRS01)

Qualification of Subcontractors

- For Class 1 and Class2 SCs: evaluation activity, carried out by Agusta, in order to be satisfied that the Subcontractor, in terms of organisation, allocation of responsibilities, quality/design assurance procedures and resources, complies with the requirements of the Agusta Design Assurance System.
- For Class 3 SCs: areas of non compliances with requirements of the Agusta Design Assurance System are covered by a direct control of Agusta using the relevant Agusta Design Assurance procedures (See 1.3).

Part or appliance
Any helicopter part, equipment, or accessory, including communications equipment, that:

- is used or intended to be used in operating or controlling an aircraft in flight
- is installed in or attached to the aircraft and includes parts of an airframe, engine or rotor.

It is intended that software is covered by the above definition

Technical Specification
Is a document produced by the Agusta design organisation to provide to the SC the necessary information to design and, as applicable, to qualify the part or appliance of his responsibility.
Depending on the kind of the contract established between Agusta and the SC, the T.S. may take the form of a Procurement Specification, Source Control Drawing, or of Design Specification.

ACRONYMS

BOE:	Bought Out Equipment
SC:	Subcontractor
DAS:	Design Assurance System
TA:	Technical Area
TC	Type Certificate
DDP	Declaration of Design and Perfomance
TS	Technical Specification
AA	Airworthiness Authorities

1 THE PROCEDURES

Implementing procedures for the subcontractors of design, are described in the Document n. QRS01 and associated Documents.
The following paragraphs provide criteria to be complied with by the Agusta responsible functions for the qualification of subcontractors of design.

1.1 Class 1 – Subcontractors

Given the present EASA Part 21 requirements for the terms and conditions to be satisfied in order to get a DOA, a class 1 subcontractors is only possible for a Type Certificated product (engines, TSO / ETSO components) and, in those cases, the present procedure does not apply.

1.2 Class 2 – Subcontractors

1.2.1 General

(a) The main objective of the qualification process is to ascertain that the Subcontractor has established and maintains a proper Design Organisation based on Design Assurance principles such as to give adequate confidence that his organisation has the capability:

- to design part or appliances in accordance with the Agusta TS;
- to show compliance with all requirements established in the Agusta TS including the specified airworthiness and environmental protection requirements and to make the relevant statement to Agusta;
- to assist Agusta in showing compliance with the applicable airworthiness and environmental protection requirements of the whole helicopter with the part(s) or appliance(s) installed on it.

For the purpose of qualification process a set of basic Qualification Requirements are established by Agusta, as described in the paragraph 1.2.2. in relation to the following fundamental subjects which characterise the SC Design Organisation:

- the organisational structure and associated allocation of responsibilities;
- the Design Assurance Procedures;
- the available resources.

On the basis of Qualification Requirements the qualification activities will be conducted in accordance with methods established under Section 1.2.3.

(b) Once the contract between Agusta and the SC has been stipulated a Design Assurance Quality Plan, subject to Agusta agreement, is requested. Such a plan shall:

- ensure adequate Design Assurance System implementation, during the development phase of the item of the contract, according to requirements of the applicable documentation;
- ensure that these rules and procedures are correctly implemented, also with its sub-suppliers.

NOTES: the final responsibility on the Compliance Verification is retained by Agusta through their own CVE.
Agusta reserve the right to conduct their own audits on the S.C. design Assurance Procedures.

1.2.2 Definition of Qualification Requirements

The Qualification and Quality Assurance Requirements for Subcontractors of Part/Equipment for Agusta aircraft are described in the procedure IQ S015

The main aspects related to this Requirements are:

(a) The Subcontractor Organisation

(1) The SC is required to provide description, through a Company Exposition (or equivalent document) of its organisation, the available resources, the allocation of the responsibilities and the procedure adopted.
Such description is usually limited to the organisational structures addressed to the design and qualification tasks committed by Agusta.

(2) Organisation charts will be included which define the various areas of activity/disciplines, their mutual relationship, hierarchical and functional links.

(3) The following functions and associated responsibilities need to be identified:

- the Technical Director (or equivalent definition) having the ultimate responsibility in all design tasks accomplished by the SC and declaring the conformity to the applicable/approved design specification, signing all the technical documentation that are part of the Design Data Set (Drawings, Specifications, QP, QTPs, QTRs, DDPs, etc.);
- the list of authorised signatories with definition of relevant responsibilities (e.g. Quality, Design and Program Management activities.).

(4) In order to grant achievement of proper standards in the design activities the SC organisation is responsible:

- to issue and maintain a system of Design Assurance Procedures;

- to accomplish a monitoring function, through audits and reviews, of the compliance with these Procedures.

(b) Design Assurance Procedures

The following subjects are required to be covered by documented procedures:

(1) Design Planning

Once the contract between Agusta and the SC has been stipulated a Plan, subject to Agusta agreement, need to be established and implemented including the following main steps:

- initial evaluation of the design requirements, including the airworthiness requirements established by Agusta in the TS; the SC is responsible to notify immediately any apparent deficiency or discrepancy;
- liaison with Agusta TAs, identifying SC and Agusta focal points for review, evaluation and discussion in relation to any design feature and issue;
- testing schedules and any step subject to Agusta control or anyway needing interface with Agusta;
- design Review (see under (d));
- definition of all necessary documentations to be issued and their classification to distinguish between documents needing approval by Agusta, documents to be delivered to Agusta, documents to be made available to Agusta on request.

(2) Documentation

In respect of documentation issued for the design package committed by Agusta the associated procedures must give evidence that all design data and documents, and their changes, conforms to a standard Quality Assurance System.
The following aspects are included, but not limited to, in the procedures related to the documentation:

- standards for preparing and compiling technical documents, including drawings, specifications, test proposal, test reports, analysis reports, etc.
- responsibilities associated with signature of drawings and other documents;
- drawing numbering system;
- drawing amendment system;
- call up of special manufacturing processes;
- specifications for qualification of materials;

- identification of peculiar issues like critical parts, identifiable parts, interchangeability, double inspections;
- configuration management including identification of current status and methods for managing subsequent changes;
- method of embodiment and recording of changes to specifications, reports and any other document related to design.

(3) Design Review

The SC shall plan and document the accomplishment of Design Reviews both of general nature and for specific objectives in order to monitor the correct development of design activity.

Such reviews shall be conducted according to written procedures, which include criteria for participation, items to be reviewed, management of corrective actions, circulation of minutes.

In principle design review shall be conducted periodically or when dictated by specific problems, with concurrent participation of all SC functions interested in design, production (as applicable) and control of the finished product. Agusta TA Agusta can request to participate to some reviews.

The design review that will be performed as minimum will be:

A. Preliminary Design Review (PDR)
B. Critical Design Review (CDR)
C. Design Review for Experimental Activity
D. Qualification Review (QR)
E. Any other Design Review originated by in-service problems

Preliminary Design Review

It is accomplished before the starting of detailed design of the product and after completion of the general design, with the purpose to verify the correct interpretation and implementation of Technical Specifications requirements and is addressed to general aspects as:

- interpretation of the requirements;
- feasibility studies:
- plan for issuing of drawings;
- plan of experimental activity;
- qualification program;
- “sealing” of interfaces related to installation and functional aspects.

Critical Design Review

Is conducted at the end of the issuing of drawings and/or supporting technical documentation and shall provide evidence of the overall compliance of the design with the requirements.

Design Review for Experimental Activity

Before starting qualification test program a specific Design Review shall verify that:

- configuration of test specimen complies with the requirements;
- all manufacturing issues have been resolved;
- test specimen are representative of final production standard.

Tests conducted before this review shall be considered development tests not susceptible to be considered as qualification tests unless so agreed with Agusta. During such review all the test proposal required by the qualification program and the list of applicable drawings and relevant revision status shall be made available to Agusta.

Qualification Review

A Qualification Design Review is conducted at the end of qualification tests in order to freeze the configuration of the qualified product.

During this phase the following documents shall be made available to Agusta:

- test reports;
- drawing list (at the up to date revision);
- general assembly which shall identify both the part in its overall aspects and single components eventually subject to request of separate spare parts.

In case any inconvenient has encountered during qualification tests, evidence shall be provided of the modification process accomplished and of verification that such modification do not influence results of previous tests; in the apposite case tests shall have been repeated.

Design Reviews for In-Service Problems

In case any service difficulty is encountered on the components already delivered, Agusta reserves the right to call for a Design Review with the SC with the objective to identify any reasons of the difficulty due to design.

(4) Conduct of Part Qualification

A procedure shall be addressed to the management of qualification activities conducted by SC. Main subjects to be covered are described under C750-02-003.5.

Qualification tests

A procedure shall be addressed to the management of testing activities carried out by the SC. Main subjects to be covered are described under 100-50-157.

Acceptance Test Procedure (ATP)

A procedure shall require the availability to the Agusta T.A of an ATP by SC which describes the tests established for the acceptance of production components.

(5) Configuration Management

The SC shall maintain Configuration Management system; by configuration management, the configuration of delivered products shall be attested, with particular attention to the modification process, including qualification follow-up.

Configuration management/control activities shall ensure the following aspects:

- definition and achievement of “Baselines”, which identify product configuration at any point of the development phase;
- the correct implementation and management of all modifications/changes affecting “Baselines”;
- for each equipment that includes SW, its P/N shall identify both HW and SW;

(6) Special manufacturing processes

When the design and manufacturing of a component include special manufacturing processes, they need to be evaluated and qualified with methodologies agreed by Agusta Quality Department.
A SC procedure is requested to cover this subject which shall conform to the applicable requirements.

(7) Design tasks committed by the SC to external sources

When the SC within the design package committed by Agusta, achieves some design tasks/services from an external source, appropriate procedures need to be established such as to ensure that these design tasks or services comply with the design requirements established by Agusta in T.S. and relevant design standards are equivalent to those granted by the SC design organisation.

Subject to be covered by those procedures include:

- criteria for selection and qualification of the SC supplier;
- notification to Agusta of the selected/qualified suppliers.
  NOTE: The choice of a supplier already qualified by Agusta as Agusta SC is recommended but not mandatory.
- transmission of all Agusta design requirements and verification of their implementation;

- documentation: evidence must be provided by appropriate documentation that tasks or services obtained by the external source satisfy the requirements established by Agusta in the T.S. and in the Procedures established by this Section of the DOA Handbook.
  Agusta reserves the right to examine for acceptance this documentation.

(8) Audits

The SC shall write procedures for internal audits to be conducted by the Design Assurance Organisation for reviewing the implementation of the Quality Assurance Procedures and their adequacy as well and external audits toward the subcontractors.

Main objectives of these audits are:

- to review proper functioning of the Design Organisation;
- to verify the adequacy of the Procedures in respect of the objectives of the design activity and relevant quality standards;
- to check correct observance of the Procedures;
- to identify areas of non conformance and/or inadequacy; appropriate corrective actions shall be identified and their implementation shall be verified by subsequent “ad-hoc” reviews.

Audit records, including audit check lists, audit results and corrective actions, will be available, on request, to Agusta.

(9) Record Keeping

The SC is requested to archives and manages all the DDS relative to P/N(s) object of the contract including the changes (Requirements Specification, materials, process, analysis reports, tests and relatives procedures, drawings, drawings normative, etc…), on behalf of Agusta as appropriate to provide evidence of compliance with the requirements established by this Section of the DOA Handbook.

The location selected to keep the records will be equipped with suitable devices in order to assure protection against accidental damage, adverse environment loss o robbery.

Records shall be available to Agusta and to the interested AA.

The records shall be retained for the number of years as specified by the contract: at the expiration of this period Agusta may require to transfer into its archives specific designated records.

(10) Continued Airworthiness

This procedure will establish for way in which the SC performs its functions in relation to the continuing airworthiness of a parts or appliances it design.

The following subjects shall be included, but no limited to, in this procedure:

- monitoring of significant events on other aeronautical products as far as relevant to determine their effect on airworthiness of parts or appliances being designed;
- ensuring that each of the manuals required by applicable rule are checked to determine that they meet the respective requirements;
- supporting the TC applicant/holder in the preparation and updating of all maintenance and operating instructions (including Services Bulletins) needed to maintain airworthiness (Continuing airworthiness) in accordance with relevant rule;
- ensuring the initiation of activities as a response to failure (accident/incident/in-service experience) evaluation and complaints from the operation.
- reporting to the TC applicant/holder any occurrence of which the SC is aware that may involve failures, malfunctions or defects on the parts and appliances installed on the helicopter, supporting the TC holder during investigation process and definition of corrective actions (See C750-02-003.3);
- coordination with the SC production organisation when dealing with any continuing airworthiness actions that are related to production of the part or appliance.

(c) Resources

Agusta will evaluate the adequacy of the resources and facilities made available by the SC for the accomplishment of the design tasks committed by Agusta. This evaluation will address:

- Technical Director
- Number, qualification and experience of:
  - Technical Staff
  - Quality Staff
  - Administrative Staff
  - Approval signatories and areas of responsibilities

- Availability of supporting structures and tools (services, computers, laboratories, test facilities, etc.).

1.2.3 Conduct of Qualification

Based on the Qualification Requirements established under 1.2.2. Agusta will conduct the evaluation of the candidate Subcontractor .
Operational steps in the conduct of the qualification process are in accordance with Sections 6.1. through 6.10 of “Procedura di Qualità” : AQ 06-01.

The qualification process is conducted under the responsibility of the Agusta P.O. Quality Organisation in accordance with this procedure and with the involvement of the Design Organisation through Qualità DT.

In the more general case the qualification of a SC versus the requirements established under 1.2.2. is integrated into an overall process covering both design and production aspect.

1.3 Class 3 - Subcontractors

When the SC design organisation has not established a proper quality system (e.g. because of the small dimension of the Company and/or low complexity of technologies involved in the design) it will not be possible to qualify the SC under the requirements of § 1.2.2.
In this case the SC will be considered as a technical structure integrated in the Agusta design organisation and subject to a direct control of Agusta Design Assurance System, including compliance verification and system monitoring activity.
Agusta DAS procedures shall be applied in all areas where the requirements under par 1.2.2. are not complied with, complemented by the procedures, if any, established by the SC for subjects where compliance with the requirements under 1.2.2. is granted.

1.4 Agusta Subcontractors list

The list of the approved Agusta subcontractors and the information on the design and production activities is defined in accordance with the document C740-12.

2 THE RESPONSIBILITIES

- The Subcontractor is responsible towards Agusta:

  - to carry out investigations and issue technical documents as necessary to demonstrate compliance with the requirements established in the T.S.;

  - to liaise with the local AA office and to support Agusta in the discussions for aircraft certification;

  - to issue a Declaration of Design and Performance (DDP).

  Note: A class 3 S.C. may not be able to fulfil the above responsibilities: Agusta will anyway compensate for all S.C. deficiencies.

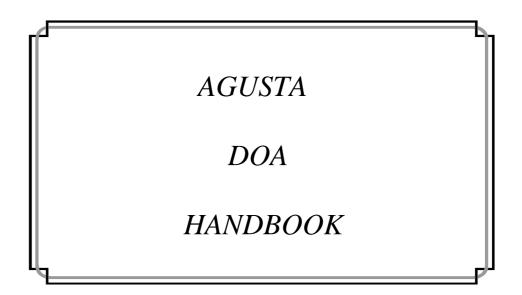
- Agusta is responsible:

  - to define specifications which are compatible with the applicable airworthiness and environmental protection requirements;

  - for verification of compliance in respect of airworthiness and environmental protection requirements applicable to both the parts and appliances in it self and to the whole helicopter with the equipment installed on it;

  - to confirm equipment compliance with specifications requirements (usually via the approval of the DDP);

  - to provide the AA with the proof of demonstration of compliance with the airworthiness and environmental protection requirements of the whole helicopter with the parts and appliances installed on it.

Responsibilities within Agusta are identified in 1.2.3.

SYSTEM MONITORING

PROCEDURE

DOC. N° C750-02-003.8

ISSUE G **DATE: February 28, 2011**

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ISSUE STATUS AND APPROVAL

ISSUE	DESCRIPTION		
A	First Issue	Prepared G.Pischiutta Checked P.G.Colombo Approved P.Alli	Date 1/12/00 Date 1/12/00 Date 1/12/00
B	Introduction of the new Forms used to carry out the System Monitoring activity	Prepared IPQ Checked P.G.Colombo Approved P.Alli	Date 20/01/03 Date 20/01/03 Date 20/01/03
C	• Updating to consider EASA PART 21 • Redefinition of responsibilities • Introduction of the new Forms used to carry out the System Monitoring activity • Modulation on the reporting about the status of DAS	Prepared G.Giannone Checked G.Pischiutta P. G. Colombo Approved P.Alli	Date 8/1/2004 Date 20/01/04 Date 20/01/04
D	Updating of the procedures quoted in the reference and in the text.	Prepared IPQ Tecnologie Checked G. Gino/ A.Cajelli Approved G. Monti	Date 20.01.06 Date 20.01.06 Date 30.01.06
E	Updating according to AQ 17-01 new issue. Elimination of appendices containing the Forms. Introduction of the reference to new Forms (ref. AQ 17-01) available n Agusta INTRANET. Updating of the referenced procedures.	Prepared IPQ Tecnologie Checked G.Gino / G.Meschi Approved G. Monti	Date 01/06/07 Date 05/06/07 Date 07/06/07
F	Updating of reference/name of quoted procedures.	Prepared IPQ Tecnologie Checked G.Gino Approved G. Monti	Date 30/06/08 Date 30/06/08 Date 09/07/08
G	Not significant changes: • Updating of referenced procedures.	Prepared M.Di Noia Checked G.Gino Approved F. Nannoni	Date 28/2/2011 Date 28/2/2011 Date 28/2/11

REFERENCES

AQM-001 Manuale della Qualità

EC regulation n. 1702/2003 “Certification of aircraft and related products, parts and appliances and of design and production organizations”

UNI EN ISO 9001:2000 para 8.2.2, UNI EN 9100:2005 para 8.2.2

C750-02 DOA Handbook

AQ 17-01 “Audit interni e gestione delle non conformità sul Sistema di Gestione per la Qualità”

AQ 18-08 “Qualificazione e mantenimento della competenza degli auditor”

SCOPE

The Design Assurance System (DAS) is the organisational structure, responsibilities, procedures and resources to assure the proper functioning of the Design Organisation.
In order to assure that the a DAS works properly, a systematic monitoring is needed. Such activity is carried out by the System Monitoring function in particular through audits aimed at verifying that the DAS procedures are adequate, applicable and really implemented.
The System Monitoring function basically works in compliance with the procedure AQ 17-01.
Scope of this procedure is to define the peculiar aspect of the DAS monitoring with respect to requirements defined in the procedure AQ 17-01.

APPLICABILITY

This procedure is applicable to the Agusta Design Organization monitoring.
It is also to be used as a guideline for the Audits of the suppliers of the Agusta DO.
The Audit activities for interface areas (DO-PO) and (DO-MO) are carried out in conformity with the Agusta Quality Manual.

DEFINITIONS

See AQ 17-01

ACRONYMS

AW	AgustaWestland
DAS	Design Assurance System
DO	Design Organisation
HDO	Head of Design Organisation
HSM	Head of DAS Monitoring
MO	Maintenance Organisation
PO	Production Organisation
QMS	Quality Management System

1 PROCEDURES / RESPONSIBILITIES

Inside the DO, the SYSTEM MONITORING is responsible to perform the activities of monitoring and evaluation of the adequacy and effective application of the DAS procedures included in the section III of the DOA handbook.
The System Monitoring liaise with the AW Quality System function for:

- the qualification of the Auditors;
- the company Audit Plan definition and performance;
- the qualification of suppliers (together with the purchasing department quality function).

See also C750-02-002

1.1 Appointment of personnel

The System Monitoring generally employs internal personnel to conduct the Audits inside the DO. The personnel in charge of the Audits must be qualified for this activity, by a formal recognition of the company.
AQ 18-08 provides the procedure for the selection and appointment of the auditors.

1.2 Responsibilities

1.2.1 Head of DAS Monitoring

- Defines an annual Audit plan both for Agusta and for the suppliers organizations, making sure that the planned audits are carried out.
- Appoints the Team Leader
- Requires the necessary training for the qualification of the Auditors to the “Audit” Department of the AW Quality System function
- Manages the information related to the audit activity and the timely closure of the identified Corrective Actions. In particular:
  - highlights the progress status of the scheduled audit;
  - keeps up to date a general status of the activity and of the corrective actions (Request of Corrective Action / RAC);
  - keeps a complete file of the RAC;
  - monitors the timely implementation of the corrective actions.
- Prepares status reports for the HDO highlighting the discrepancies, the status of the RAC and making proposals, as necessary, for improvement of the procedures
- Verifies the activity performed and its effectiveness
- Keeps relationship with the Authority as regard the activities of competence
- Keeps records of the activity performed
- Keeps the file of the appointed auditors
- Keeps the records available on request to the Authority

1.2.2 Team Leader

- Employs properly qualified Auditors
- Guides and collaborates with Auditors during audit execution and is responsible of the execution itself
- Issues and sends audit notifications to the interested functions within ten work-days before audit execution
- Calls for a briefing, together with the interested functions, before audit execution
- Calls for a de-briefing to show audit results to the interested functions
- Issues an Audit Report within two weeks by audit execution and sends the RAC and the remarks
- Verifies the implementation of recovery and corrective actions and performs the reminder procedure, if necessary, according to AQ 17-01.

1.2.3 Auditor

- Uses proper check-lists containing the requirements to be checked
- Checks the applicable requirements, during audit execution, by means of interviews, activity monitoring and documentation review
- Notes evidences on the applicable check-lists
- Evaluates evidences to identify any non conformity

1.3 Planning of activities

1.3.1 Annual Plan

The System Monitoring arranges an annual plan for the Audits in which the following aspects are identified:
- departments/functions subject to Audit;
- issues, rules or procedures to be verified by the Audits;
- dates.

The plan, included in the AW QMS audit plan, is approved by the HDO and available to the Authority. The planning shall consider a verification of the main DAS procedures listed in the DOA Handbook at least once every two years; the schedule can be reduced on the basis of the identified non conformities and criticality.

1.3.2 Issues/Characteristics/Requirements to be audited

For each requirement or subject to be verified suitable check list are issued.

1.4 Audit

The audit process begins with an initial briefing involving the auditors team and the area / function to be checked, in which the objectives, the contents and the logistic aspects of the inspection have to be defined.
The following step is the audit execution, in which the team has to check the compliance of the audited area / function with the applicable requirements and the relevant procedures; the audit evidences have to be evaluated to identify any non conformity.

1.4.1 Non conformities and their classification

Part 21 defines as "findings" the objective evidence of non compliance with the applicable requirements of the Part itself. Part 21 classifies the findings as: Level one, Level two or Level three. The non conformities classification is defined in the procedure AQ 17-01.
In case of Level 1 non conformities, the DOA approval could be suspended, partially or totally revoked.

1.4.2 Corrective actions

When the Team Leader, supported by the Auditors, finds a Level 1 or 2 non conformity, the RAC is issued:

1) In case of Level 1 non conformity, the responsible function has to define and implement the Corrective Action within 21 days by the non-conformity notification.
2) In case of Level 2 non conformity, the Corrective Action has to be implemented in a period depending on the non conformity itself, but in any case not superior to six months; this period could be extended, after the Authority approval. A Level 3 non conformity doesn't need an immediate intervention by the responsible function.

1.4.3 Procedure

Form "Request of Corrective Action"

See the procedure AQ 17-01.

The Team Leader sends the filled Form to the Department considered responsible for the Corrective Action. The Department shall define the Corrective Action and the date of the implementation.
In case of disagreement between the Team Leader and the Department representative, the latter has the faculty not to compile the box of the Form of its competence and appeal in writing to the upper function in hierarchy, to the HSM and, subsequently, to the HDO.

Starting from the expiring date for the implementation of the Corrective Action, the System Monitoring is responsible to verify the complete application and effectiveness of the Corrective Action itself.
In case of non-implementation of the Corrective Action, the HSM urges the Department Responsible (copy to the HDO) according to the reminder procedure defined in the AQ 17-01.
If, after the further month, the Corrective Action is not yet applied, the HSM informs the HDO and collaborates with him for definition of the actions that have to be performed.

Form "Remark "

See the procedure AQ 17-01.

1.4.4 Closure of Audit

See the procedure AQ 17-01.

1.5 The Audit Report

The Audit Report is filled in conformity with AQ 17-01.

2 REPORTING

The HSM reports to the HDO on the adequacy of the DAS procedures and agrees with him the necessary corrective actions.

Every 4 months formal meetings are held between HSM e HDO to discuss and analyse the results of the System Monitoring activity.

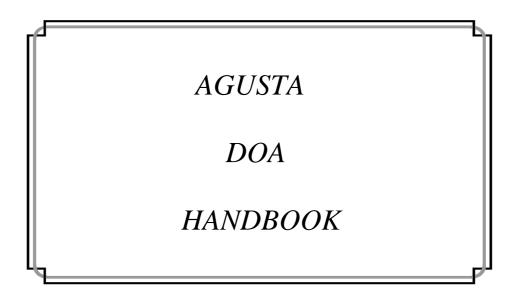
At the end of the year, the HSM presents to HDO the final report containing the status of the activities, the Corrective Actions status and makes proposals for possible improvements.
This report will be sent to the Authority.

3 FORMS

The forms Audit Report, Corrective Action Request and Remark are available through Agusta intranet “Company Operating System”.

AGUSTA

DOA

HANDBOOK

D.A.S. PROCEDURES

DOC. N° C750-02-003.9

ISSUE K **DATE: February 28, 2011**

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ISSUE STATUS AND APPROVAL

ISSUE	DESCRIPTION		
A	First issue	Prepared P. G. Colombo Checked P. G. Colombo Approved P. Alli	Date 01/12/00 Date 01/12/00 Date 01/12/00
B	Relocation of paragraph on applicable regulation to C750-02-001 Relocation of paragraph on “Prescrizioni di Aeronavigabilità” to C750-02-003.3 Updating of the listed procedures, clarification in the text and reference to the Agusta network that makes the documentation available in electronic form	Prepared IPQ Checked P. G. Colombo Approved P. Alli	Date 20/01/03 Date 20/01/03 Date 20/01/03
C	Updating of the referenced applicable regulation to EC 1702/2003 Updating of the listed procedures	Prepared Airworth. Off. Checked P. G. Colombo Approved P. Alli	Date 20/01/04 Date 20/01/04 Date 20/01/04
D	Updating of the listed procedures	Prepared IPQ Checked P. Colombo Approved P. Alli	Date 06/09/04 Date 06/09/04 Date 07/09/04
E	Updating of the quoted procedures	Prepared IPQ Tecnologie Checked G. Gino Approved G. Monti	Date 20/01/06 Date 20/01/06 Date 30/01/06
F	Updating of the quoted procedures	Prepared IPQ Tecnologie Checked G. Gino Approved G. Monti	Date 28/07/06 Date 28/07/06 Date 28.07.06
G	Updating of the quoted procedures	Prepared IPQ Tecnologie Checked G. Gino Approved G. Monti	Date 01/06/07 Date 01/06/07 Date 06/07/07
H	Updating of the quoted procedures	Prepared IPQ Tecnologie Checked G. Gino Approved G. Monti	Date 20/11/07 Date 20/11/07 Date20/11/07
I	Updating of reference/name of quoted procedures.	Prepared IPQ Tecnologie Checked G.Gino Approved G. Monti	Date 30/06/08 Date 30/06/08 Date 09/07/08
J	Updating of reference/name of quoted procedures.	Prepared IPQ Tecnologie Checked G.Gino Approved G. Monti	Date 09/07/09 Date 09/07/09 Date13/07/09

ISSUE	DESCRIPTION	
K	Not significant Updating of reference/name of quoted procedures	Prepared M. Di Noia Date 28/2/2011 Checked G.Gino Date 28/2/2011 Approved F. Nannoni Date 28/2/11

REFERENCES

EC Regulation n. 1702/2003 “Certification of Aircraft and related products, parts and appliances, and of design and production organizations

C750-02-001	“General”
C750-02-002	“The Design Assurance System”
C750-02-003.1	“Type Investigation Procedure”
C750-02-003.2A	“Procedure For Classification And Approval Of Changes To Type Design”
C750-02-003.2B	“Procedure for Classification and Approval of Design Major Repair”
C750-02-003.2C	“Procedure for approval of Flight Conditions and issue of a Permit to Fly”
C750-02-003.3	“Procedure for Continued Airworthiness”
C750-02-003.4	“Procedure for Record Keeping”
C750-02-003.5	“Procedure for Equipment Qualification”
C750-02-003.6	“Coordination between Design and Production, list of the arrangements”
C750-02-003.7	“Procedure For Qualification of Subcontractors”
C750-02-003.8	“System Monitoring Procedure”
AWEOS011	“Panagon user manual”
100-50-176	“Conformità alle norme di aeronavigabilità e di programma di omologazione modalità di preparazione e gestione dei documenti relativi”

1 SCOPE

This section of the DOA Handbook has the scope of:

Collecting the references to the procedures that must be complied/considered while carrying out the DAS processes, in a way that is easy to check.

Define the responsibilities for knowledge and updating of the procedures.

2 APPLICABILITY

This section of the Handbook is applicable to whoever apply and / or manage the Agusta DAS procedures.

3 DAS Procedure and matrix of responsibility

Part III of the Handbook is the collection of top level D.A.S. procedures dealing with DAS processes and one section providing a full list of the Handbook procedures and of those therein referenced.

Appendix 1 provides a matrix with the full list of the procedures and the associated responsibilities.

The quoted codes have the following meaning.

R = The procedure assign specific responsibilities to the function.

I = The procedure do not assign specific responsibilities but never the less it deals with subjects that has to be known in general by the personnel of the function for properly carrying out their activities.

G = The function has the responsibility to keep the procedure up to date and issue the document in accordance with the applicable standards.

Either "R" or "I" code means that the procedure is of specific interest of the function; in any case, anybody dealing with a process covered by a procedure, is required to follow the relevant one.

Notwithstanding the fact that the activities are mainly led by the DOA Handbook, it is necessary that the originating rules are available at each function for consultation and use; this is particularly true for the airworthiness rules.
See C750-02-004 and the 100-50-176.

The Heads of each function of the Design Organization must make sure that all the applicable procedures are available and known by those in charge of applying them.
See C750-02-002 for the training management.

4 USING THE UPDATED PROCEDURES

Everybody acting within a given process, is responsible to verify that he conforms with the applicable procedures as issued at the time.
All the regulations and procedures of interest to the Design Assurance System are available together with their status of issue on the "PANAGON" system (ref. AWEOS011).

APPENDIX 1: LIST OF DAS PROCEDURES AND MATRIX OF RESPONSIBILITIES

N° PROCEDURE	TITLE	FTE	TECHNICAL AREA	CVE	CPE	AERON	ENGI. PROCEDURES & DATA MANAGEMENT	EXPERIMENTAL OPERATIONS	SYSTEM MONITORING	HDO	LABORATORIES	ENG. LICENCES & SUPPORT./ PRODUCT SUPPORT ENGINEERING
C750-02-001	PART1 GENERAL	R	R	R	R	G/R	I	R	R	R	R	R
C750-02-002	PART2 DESIGN ORGANIZATION	R	R	R	R	G/R	I	R	R	R	R	R
C750-02-003.1	TYPE INVESTIGATION PROCEDURE	R	R	R	R	G/R	I	R	R	R	R	R
C750-02-003.2A	PROCEDURE FOR CLASSIFICATION AND APPROVAL OF CHANGES TO TYPE DESIGN	R	R	R	R	G/R	I	R	R	R	R	R
C750-02-003.2B	PROCEDURE FOR CLASSIFICATION AND APPROVAL OF DESIGN MAJOR REPAIR	I	R	R	R	G/R	I	I	I	R	I	R
C750-02-003.2C	PROCEDURE FOR APPROVAL OF FC AND ISSUE OF A PTF	I	I	I	R	G/R	R	R	I	R	I	-
C750-02-003.3	PROCEDURE FOR CONTINUED AIRWORTHINESS	R	R	R	R	G/R	I	R	R	R	R	R
C750-02-003.4	RECORD KEEPING	I	I	I	R	R	G/R	I	I	R	I	I
C750-02-003.5	PROCEDURE FOR EQUIPMENT QUALIFICATION	I	R	R	R	G/R	I	I	R	R	R	I
C750-02-003.6	COORDINATION BETWEEN DESIGN AND PRODUCTION, LIST OF THE ARRANGEMENTS	I	R	I	R	G/R	R	I	R	R	I	I
C750-02-003.7	PROCEDURE FOR QUALIFICATION OF SUBCONTRACTORS	I	I	I	R	G/I	I	I	R	R	I	I
C750-02-003.8	SYSTEM MONITORING PROCEDURE	I	I	I	I	I	I	I	G/R	R	I	I
C750-02-003.9	DAS PROCEDURES	I	I	I	I	G/I	I	I	I	R	I	I
C750-02-Addendum I	SPECIFIC FEATURES OF THE DESIGN ASSURANCE SYSTEM FOR THE EH101 PROGRAM	R	R	R	R	G/R	R	R	R	R	R	R

N°PROCEDURE	TITLE	FTE	TECHNICAL AREA	CVE	CPE	AERON	ENGI. PROCEDURES & DATA MANAGEMENT	EXPERIMENTAL OPERATIONS	SYSTEM MONITORING	HDO	LABORATORIES	ENG. LICENCES & SUPPORT./ PRODUCT SUPPORT ENGINEERING
AWEOP001	Management of AW Engineering Organization technical documents	R	R	R	R	R	G/R	I	I	R	I	I
AWEOP002	Signature procedure for technical documents	R	R	R	R	R	G	I	R	R	I	I
AWEOS011	Panagon User Manual	R	R	R	R	R	G	R	I	R	R	R
NTA010R	Requisiti generali procedure disegno		R	I	I	I	G	I	I	R		
NTA099R	Requisiti Aperture card (35 mm.)						G			R		
NTA025R	Intercambiabilità		R	I	R	I	G	I	I	I	I	
100-50-02	Norme relative alla esecuzione dei disegni tecnici		R	I	I	I	G	i	I	R		
100-50-009	Management of technical documents excluding “drawings”	R	R	R	R	R	G/R	I	I	R	I	I
100-50-017	Gestione ‘Disegni’ e ‘Software’ imbarcati		R		R		G	I	I	r		I
100-50-31	Identificazione dei documenti Agusta e Agusta/ licenze su supporto miniaturizzato (microfiches)						G		I	R		
100-50-116	Gestione documenti classificati	I	I	I	I	I	G	I	I	R	I	I
100-50-125	Design Review of AW engineering Organization	R	R	R	R	R	G	I	R	R	I	
100-50-132	Authorization for experimental aircraft operations - AG Form59	R	R	I	R	R	G	R	I	R		
100-50-134	Definizione del programma di manutenzione degli elicotteri civili e della relativa manualistica		R	R	R	G	I	I	I	R		
100-50-140	Bollettini tecnici: preparazione e approvazione	I	R	I	R	G/I		I	I	R		R
100-50-143	Gestione- consultazione della normativa tecnica nazionale ed internazionale	R	R	R	R	R	G	R	I	R	R	R
100-50-148	Gestione delle parti “classificate”	I	R	I	R	I		I	G/I	R	I	I
100-50-153	Procedura per la gestione della DDP durante la fase di sviluppo e preserie		R	I	I	I		I	G	R	I	
100-50-157	Inspections and tests in civil certification processes	R	R	R	R	G		R	R	R	R	
100-50-158	Guidance criteria for the classification of changes to Type Design	I	I	I	R	G			I	R		
100-50-163	Documenti gestiti dall'Ufficio Aeronavigabilità					G			I	R		

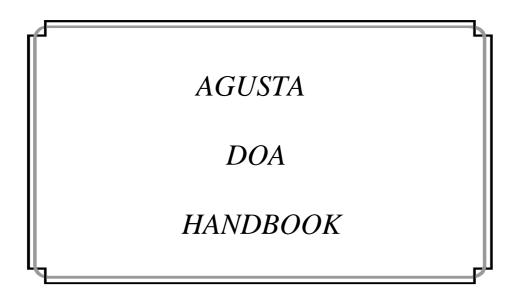
N° PROCEDURE	TITLE	FTE	TECHNICAL AREA	CVE	CPE	AERON	ENGI. PROCEDURES & DATA MANAGEMENT	EXPERIMENTAL OPERATIONS	SYSTEM MONITORING	HDO	LABORATORIES	ENG. LICENCES & SUPPORT./ PRODUCT SUPPORT ENGINEERING
100-50-165	Procedura per la definizione e compilazione delle specifiche tecniche e source control drawing per parti di fornitura esterna		R	I	R	R	I		G/I	R		
100-50-173	Professional requirements for “management staff” and “certifying personnel”	I	I	I	I	G	I	I	I	R	I	I
100-50-175	CVE and AE tasks, responsibilities, operating procedures	I	I	R	I	G/R	I	I	I	R	I	I
100-50-176	Conformità alle norme di Aeronavigabilità, programma di omologazione modalità di preparazione e gestione dei documenti relativi	R	R	R	R	G/R		I	I	R	I	I
100-50-178	Gestione software tecnico-gestionali della VGDT	I	I	I	I	I	G/R	I	I	I	I	I
100-50-180	Operazioni e manutenzione degli aeromobili sperimentali	R	I	I	R	I		G	I	R		
100-50-182	Approvazione di installazioni comprendenti apparati non approvati su elicotteri destinati all’impiego civile	I	R	R	R	G/R	I	I	I	I	I	R
100-50-194	Authorized Technical Expert (ATE) – Sustaining Engineer (SE)		R		I	I				G/R		
100-50-195	ATP – Acceptance Test Procedure	I	R	I	R	I	G/R	R	I	I		R
100-50-197	Flight conditions and Permit to Flight	I		R	R	G/R	R	I		I		
100-50-198	Design Change Authorization (AMD)		I		R	I	G/R			I		
100-54-005	Gestione e taratura degli strumenti di misura		I					I	I		G/R	
100-55-002	Istruzione per la preparazione della relazione “lista parti critiche”		I	I	R	I	G	I	I	R		I
100-55-015	Istruzione per la compilazione dell’Engineering Order	I	R	I	R	I	G	I	I	R	I	I
100-55-022	Configurazione Produttiva		I	I	R	I	G	I	I	R		
100-55-023	Vendor Item List	I	R	I	R	I	G	I	R	I		
100-56-005	Manuale utente procedura Distinta Base Tecnica (DBT)		R		R		G	I	I	R	I	I
LS900-801-01-01	Sistema Qualità nel Laboratorio Prove Strutturali		I	I	I	I			I	I	G/R	

N° PROCEDURE	TITLE	FTE	TECHNICAL AREA	CVE	CPE	AERON	ENGI. PROCEDURES & DATA MANAGEMENT	EXPERIMENTAL OPERATIONS	SYSTEM MONITORING	HDO	LABORATORIES	ENG. LICENCES & SUPPORT./ PRODUCT SUPPORT ENGINEERING
LTS 2228	Sistema Qualità nel Laboratorio Tecnologie Sperimentali		I		I	I			I	R	G/R	
LI900-P001-01	Modalità operative del laboratorio ATIM			I	I	I			I	I	G/R	
LI900-C52-01	Normativa per il controllo della strumentazione del laboratorio in corrispondenza alla norma AQ11-01										G/R	
PRO.FSE.019.96	Repairs design, management and approval		I		R	I			I	R		G/R
PRO.FSE.020.96	Raccolta dei rapporti d'inconveniente ricevuti da engineering customer support	I	I		R	I		I	I	R		G/R
PRO.FSE.026.96	Procedura operativa per la conservazione e la distribuzione delle pubblicazioni tecniche				I	I	I		I	R		G
PRO.FSE.052.02	Procedura per la preparazione, la validazione e l'approvazione delle pubblicazioni tecniche	I	I	I	R	R			I	R		G
PRF.SCC.015.00	Modalità operative laboratorio trasmissioni					I			I	R	G/R	
PRF.SCC.018.00	Definizione delle discipline di specializzazione e deleghe di firma per area PTCM della Divisione Trasmissione		G	I	I	I			I	R		
PRO.SPS.075.09	Modification Engineering – Main tasks and responsibilities for the design and the approval of minor changes to the Type Design.		R	I	R	I				R		R
SIN/95/0360	Access control to the printing and reference offices	I	I	I	I	I	G	I	I	R	I	I
STD-PR-0121	Documentation Management System for EH101 Civil Management Computer (FMC)		G (2)			I	I		I	R		
ER099	Cards, aperture field of application and definition	I	R	I	R	I	G	I	I	R	I	I
AQ 05-02	Control of documents		I	I	I	I	R	I	I	R		I
AQ 06-01	Suppliers Quality System approval process		I	I	I	I		I	R	I		
AQ 06-02	Purchasing documents – Quality requirements		I		I		I			I		
AQ 06-12	Monitoring process of suppliers		I			I		I	R	I		
AQ 08-02	Traceability and identification		I	I	R			I	I	I		

N° PROCEDURE	TITLE	FTE	TECHNICAL AREA	CVE	CPE	AERON.	ENGI. PROCEDURES & DATA MANAGEMENT	EXPERIMENTAL OPERATIONS	SYSTEM MONITORING	HDO	LABORATORIES	ENG. LICENCES & SUPPORT./ PRODUCT SUPPORT ENGINEERING
AQ 09-01	Manufacturing maintenance documents		I		I				I			
AQ 09-06	Production Permit – EH101 program		R	I	R	I		R	I	I	I	
AQ 09-11	Deviations (Production Permit)		R	I	R	I		R	I	I	I	
AQ 09-13	First Article Inspection		I	I	I	I		I	I	I	I	
AEQ-P 1632 [3]	Experimental activity at Vergiate plant	R	I	I	R	I		I	I	I		
AQ 10-12	Permits to Fly				R							
AQ 11-01	Measurement instruments	I	I					I			R	
AQ 12-02	Materials identification		I	I	I	I		R	I	I	I	
AQ 12-03	Manufacturing Inspection Report				I	I		I	I	I		
AQ 12-04	Log Card		I		R			R	I	I	I	
AQ 13-01	Non conformances and relevant corrective actions management		R	I	R	I		R	I	I	I	
AQ 13-04	Anomalies and corrective actions	R	R	I	R	I		R	I	I	I	
AQ 13-05	Occurrences reporting and management process	I	I	I	R	I		I	I	I		
AQ 13-11	Accidents and serious incidents reporting and management process				R	I		I	I	R		
AQ 13-15	Concessions (MDR)		R	I	R	I		R	I	I	I	
AQ 15-07	Materials shipment			I	I	I		I	I	I	I	
AQ 15-10	Incoming		I		I		I	I	I	I		I
AQ 16-04	Controls of record							R	R	I	R	
AQ 17-01	Internal audits	I	I	I	I	I	I	I	R	I	I	I
AQ 18-08	Training for auditors	I	I	I	I	I	I	I	R	I	I	I
AQ 19-03	Experimental helicopters transfer	I		I	R	I		R	I	I		

N° PROCEDURE	TITLE	FTE	TECHNICAL AREA	CVE	CPE	AERON.	ENGI. PROCEDURES & DATA MANAGEMENT	EXPERIMENTAL OPERATIONS	SYSTEM MONITORING	HDO	LABORATORIES	ENG. LICENCES & SUPPORT./ PRODUCT SUPPORT ENGINEERING
AQM-001	Quality Manuals	I	I	I	I	I	I	I	I	I	I	I
QRS01	Quality Requirements for Suppliers	I	I	I	I	I		I	I	I		
IQ S015	Qualification and Quality Assurance Requirements for Suppliers of Equipment during design and Development Phases		R	I	I	I			R	I		
C740-07	Manuals of configuration management	I	I		R	I		I	I	I		
C740-10	System Monitoring of the Design Organization	I	I	I	I	I	I	I	G/R	I	I	I
C740-12	Agusta Supplier situation	I	I	I	I	I		I	I	I		
C740-15	Arrangement DO-PO	I	R	I	R	G/R	R	I	R	R	I	I
A.A.C. - 003	Coordination between Agusta Spa as Type Certificate Holder and Agusta Aerospace Corporation as Production Organisation	I	R	I	R	G/R	R	I	R	R	I	I

NOTE:

1) Qualità Normative / Quality System is responsible to manage the AQ and IQ series (in accordance with AQ 05-04), C740-07, C740-12, C740-15 and QRS01 procedures
2) Electrical and Avionic Systems D&D
3) Managed by Vergiate plant Quality Department

ADDENDUM I

SPECIFIC FEATURES OF
THE DESIGN ASSURANCE SYSTEM FOR THE EH101 PROGRAM

DOC. N° C750-02-ADDENDUM I

ISSUE H **DATE: February 28, 2011**

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ISSUE STATUS AND APPROVAL

ISSUE	DESCRIPTION			
A	First issue	Prepared by	IPQ Tecnologie P.G. Colombo	Date 16/09/05
		Checked by	G. Monti	Date 16/09/05
		Accepted by	S. A. Holton M. L. Overd D. J. Tyler	Date 16/09/05
		Approved by	B. Spagnolini	Date 16/09/05
B	Updating on the appointed Head of the Office of Airworthiness	Prepared by	IPQ Tecnologie G.Gino	Date 20/01/06
		Checked by	G. Monti	Date 30/01/06
		Accepted by	S. A. Holton M. L. Overd D. J. Tyler	Date
		Approved by	B. Spagnolini	Date 30.01.06
C	Updating of the appointed personnel of integrated Agusta / Westland Design Organisation. Introduction of the reference to procedure n. 100-50-194.	Prepared by	IPQ Tecnologie G.Gino	Date 28/07/06
		Checked by	G. Monti	Date 28/07/06
		Accepted by	S. A. Holton M. L. Overd D. J. Tyler	Date 01/08/06 Date 02/08/06 Date 01/08/06
		Approved by	B. Spagnolini	Date 31/07/06

ISSUE	DESCRIPTION	
D	Updating the design organization and appointed persons taking into account AW Company Notices " n° 01/07, 04/07, 07/07, 08/07 e 09/07. Updating of the referenced procedures	Prepared by G.Gino Date 01/06/07 Checked by G. Monti Date 07/06/07 Approved by B. Spagnolini Date 09/06/07
E	Updating of the sharing activities table paragraph 1.1.2. Deleting of the reference to document n. EC01X0048J. Updating of the referenced procedures.	Prepared by G. Gino Date 20/11/07 Checked by G. Monti Date 20/11/07 Approved by B. Spagnolini Date 20/11/07
F	Updating reference/name of quoted procedures.	Prepared by G. Gino Date 30/06/08 Checked by G. Monti Date 09/07/08 Approved by B. Spagnolini Date 10/07/08
G	Introducing the reference to the procedure AQ 13-16 for occurrences and accident reporting to ENAC / EASA.	Prepared by G. Gino Date 09/07/09 Checked by G. Monti Date 13/07/09 Approved by B. Spagnolini Date 14/07/09
H	Not significant changes: • Minor improvements • Updating reference/name of quoted procedures.	Prepared by G. Gino Date 28/2/11 Checked by F.Nannoni Date 28/2/11 Approved by B. Spagnolini Date 28/2/11

REFERENCES

EC Regulation n. 1702/2003 “Certification of Aircraft and related products, parts and appliances, and of design and production organizations

C750-02 Agusta DOA Handbook

DEFINITIONS

Airworthiness requirements: for the purpose of the civil EH101 means those provided through JAR/ FAR/ CS 29
Environmental requirements: in the context of DOA mean those provided through ICAO Annex 16

ABBREVIATIONS

ACSR	Active Control of Structural Response
AE	Airworthiness Engineer
AFCS	Automatic Flight Control System
APU	Auxiliary Power Unit
AW	AgustaWestland
CPE	Chief Project Engineer
CVE	Compliance Verification Engineer
DI	Departmental Instruction
DO	Design Organization
DOA	Design Organization Approval
ECO	Engineering Change Order
EMC	Electro-magnetic compatibility
FFFP	Flammable Fluid Fire Protection
ISO	International Standards Organization
MAF	Manual Approval Form
NDC	Notice of Design Change
PIM	Periodic Inspection Manual
PO	Production Organization
PS	Procurement Specification
RFM	Rotorcraft Flight Manual
SAP	Systems Application Product

APPLICABILITY AND SCOPE

The EH101 is an aircraft type resulting from the joint efforts of Westland Helicopters Limited and Agusta S.p.A. since the early eighties.
The EH101 Type Certificates, were previously held by AWIL (formerly EHI).
The company restructuring and the change in the European aviation regulation imposed the TCs transfer to a single DOA holding company.
Agusta, as the new TC holder, together with Westland, set up an organization and defined procedures capable of supporting the related responsibilities with due regard to the existing Westland and Agusta design work share. A positive development of the relationship between Agusta and Westland is expected from the new AW Integrated Engineering Organization as described in C750-02-002.
The procedures of this addendum apply to the DO dealing with the civil EH101 variants for which a civil Type Certificate has been granted.

1 THE DESIGN ASSURANCE SYSTEM (DAS)

The Design Assurance System established within the Agusta DO as described in the Procedure C750-02 is applicable also to the EH101.

The structure of the integrated AW Engineering Organization is provided in Appendix I to procedure C750-02-002.

Specific features related to the EH101 organizational structure, allocation of responsibilities, applicable procedures and human resources are highlighted in this addendum as per the following subparagraphs.

1.1 Organizational structure and Agusta/ Westland design work share

EH101 design activities are performed by both Agusta and Westland Design Departments, now integrated in the AW Engineering Organization.

The same design work share has been established between Agusta and Westland with respect to the basic aircraft design both for the various military and the civil aircraft configuration.

The following table describes the Agusta / Westland work share that is to be applied for the civil EH101:

Westland work share
Forward fuselage, cabin & cowlings excl. cargo door
Fore and Aft Undercarriage
Production Trim & cabin safety
Engine Installation
Fuel System; Power plant fire protection; FFFP (flammable fluids fire protection). Excl. FFFP for hydraulics
Heating, ventilation & cooling (incl. avionics cooling); air start
Main rotor blades

Yaw Limiter
ACSR
Electrical installations for the cockpit (instrument panel, overhead console, interseat console etc.)
Avionics. Incl. AFCS and excl. AMS / DTD hardware & software, Central Warning Panel, Standby power system display
Floatation system
Agusta work share
Rear fuselage, tail unit and stabilizer including cargo door
Main Rotor hub, tail rotor and rotating controls
Drive system mechanism
Electrical generation and distribution system
Avionics: AMS / DTD hardware & software, Central Warning Panel, Standby power system display
Fixed flying controls
Hydraulic system incl. FFFP for hydraulics
APU installation
Flight tests and flight manual
Maintenance Manual

The following sub paragraphs describe the top level functions of the departments involved in the civil EH101 design.

1.1.1 Agusta

Agusta functions are those described in the Chapter 2 of the Procedure C750-02-002.

1.1.2 Westland

The main Westland design functions are since March 2007 integrated into the new AW Engineering Organization as per C750-02-002.

The specific functions undertaken for EH101 civil work according to the sharing table are defined below.

STRUCTURES & VEHICLE SYSTEMS D&D

Responsible for the airframe, undercarriage, engines and ancillary systems as follows:

- identification of structural loading criteria
- definition of inertial and other loads and integration with air vehicle loads
- overall structural analysis (stress, dynamics and crashworthiness)
- mass properties management
- airframe detailed design
- undercarriage specification and design (unless subcontracted)
- all aspects of engine & APU installations
- environmental control systems and air systems
- fuel systems
- hydraulic and other ancillary systems
- flight safety systems (fire protection systems, flotation systems etc.)

The Head of Structures and Vehicle Systems is additionally responsible for the following which cover all design disciplines:

- a dedicated support to production team (covering for initial assessment at least, all design disciplines)
- structural and mechanical test facilities (providing static, dynamic and environmental testing) and a materials laboratory with associated specialist engineers.

ELECTRICAL AND AVIONIC SYSTEMS D&D

Responsible for all electrical and avionic systems except flight control systems and active vibration control systems. Department responsibilities include:

- specification of avionic systems and equipment to meet both platform and mission requirements
- subsequent support to the procurement of equipment to meet necessary qualification requirements
- where not subcontracted, the design of avionic systems
- where not subcontracted, the development of avionic software
- electro-magnetic compatibility across the complete aircraft
- defensive & weapon systems

- cockpit design and related ergonomic assessments
- the management and development of a flexible simulation facility
- design and specification of all electrical systems (e.g. power-systems, lighting etc.)
- design of electrical installation and wiring (harnesses, connectors etc) for all electrical and avionic systems.

ROTOR SYSTEMS D&D

Responsible for the rotating components (downstream of the propulsion system) and mechanical flying controls as follows:

- rotor blade & hub design
- the design of both stationary and dynamic flying controls

The rotor design team is co-located with and works closely with blade manufacturing department. It has its own materials specialists.

The Head of Rotor Systems D&D is also responsible for the following overall aircraft activities:

- design, installation and support of development instrumentation
- modeling and specification of overall performance envelopes
- automatic flight control systems and fly-by-wire primary flight control systems
- the specification, design and validation of systems for active vibration control
- the specification, design and validation of health & usage monitoring systems
- both subsystem and whole vehicle vibration testing
- modeling and specification of vehicle air-loads
- vehicle environmental clearance, including ice/snow and ship interface aspects

- the systematic analysis of aircraft safety
- the preparation and management of flight clearance documentation
- all aspects of preliminary design including research and operational effectiveness.

OTHER RELEVANT WESTLAND ENGINEERING GROUPS
The other Engineering teams relevant to the EH101 civil activity are the EH101 Project Engineering

1.2 Allocation of responsibilities

The persons who take decisions affecting airworthiness within the DO for the EH101 program, are the same as those for other programs, namely the Chief Executive, the Management Staff and the Certifying Personnel.

There are no changes to Chapter 3 of the Procedure C750-02-002 for the tasks of the Chief Executive, the HDO, the CPE, the Head of Airworthiness Office and the Head of System Monitoring. In particular, emphasis is put here to the fact that the above mentioned persons are responsible for both Agusta and Westland design activities.

The tasks of the appointed Westland persons are the same as those described in C750-02-002 for the equivalent Agusta functions. In particular:

- for the Heads of department see C750-02-002 par 3.4.1 and 3.4.2
- the Westland Project Engineers support the EH101 CPE for activities described in C750-02-002 par 3.3.3
- for the AE and CVEs see C750-02-002 par 3.5.2. and 3.5.1, and 100-50-175
- for the Westland Auditors, see C740-10.
- for the Westland Areas and Offices, see C750-02-002 par 3.4.2 and 3.4.3

Tasks and responsibilities allocated to Certifying Personnel (CVEs and AEs) are given in the Procedure 100-50-175.

Para 1.1.3 provides the list of the appointed persons authorized, in the context of the DO, to sign statements or documents related to EH101 accomplishment of applicable rules. The list has to be considered complementary to the Paragraph 3.6 of the Procedure C750-02-002.

For the management of production non conformities (concessions) originated at Westland, see par 7.3 of this Addendum. The Westland persons authorized to review and classify concessions and sign disposition of the "minor" category are listed in the Procedure 100-50-194.

1.3 Applicable procedures

Where not differently specified in this Addendum, the Procedures referenced in the DOA Handbook sections and, in particular, in the C750-02-003.9 are valid for the EH101 Program. For an easy reference, see paragraph 10 of this Addendum.

1.4 Human resources

Qualification and experience criteria to be followed for the appointment of people involved in the EH101 Program are those contained in the Procedure 100-50-173, considered applicable at both Agusta and Westland facilities. It is useful to underline the following aspects of the above mentioned procedure:

- Grand father rights exist for the personnel appointed prior to the DOA release and quoted in this Addendum.
- Personnel already recognized by an European authority for a similar task are deemed acceptable.

In the same Procedure the methods for collecting and keeping records of qualification and training are also described.

There are no variations to the requirements listed in the Chapter 6 of the Procedure C750-02-002 concerning EH101 Program training of personnel.

1.5 Interface between Design Organization and other functions

Chapter 4 of the Procedure C750-02-002 is still valid.

New interfaces are established between the Agusta DO and other Westland Organization. Relevant links are described in Chapter 7 of this Addendum.

1.6 Changes to the Design Organization

Chapter 7 of C750-02-001 applies to the integrated Agusta / Westland Design Assurance System.

2 TYPE INVESTIGATION PROCEDURES

Additional notes with respect to the contents of the Procedure C750-02-003.1 follow regarding the management of changes to the Rotorcraft Flight Manual and Maintenance Manual (PIM).

2.1 Rotorcraft Flight Manual (RFM)

The Flow Chart contained in the Appendix A1 of the Procedure C750-02-003.1 is also applicable to the EH101 Program.

In particular, for Westland design sharing responsibilities:

- The Agusta Flight test department, supported by the Westland Flight Test department, collects data intended to define aircraft limitations and procedures provided both by flight test activities and by other involved Design Organization functions.
- The Agusta CVE for flight issues, supported by the Westland CVEs as required (according to their own competencies on the specific subject), is responsible for the final verification of the Rotorcraft Flight Manual (content correctness and completeness), once the draft copy has been ratified by the CPE. The Agusta CVE for flight issues, supported by the Westland CVEs as necessary, is the main point of contact for the Agency
- Approval signatures are collected on the MAF (Manual Approval Form), managed by the Airworthiness Engineer responsible for that change

NOTE If flight tests are required to validate some elements of the RFM, the document n. 100-50-157 applies. Flight tests are carried out under the responsibility of Agusta “Experimental Operations” department.

2.2 Maintenance Manual

As for the RFM, the MAF is the form which records Maintenance Manual (PIM) approval signatures.

Agusta is responsible for EH101 civil publications, including the Maintenance Manual but Westland is normally involved where the Westland workshare is affected and a change to the manuals supporting the aircraft type is needed.
The Agusta CVE for safety and maintenance programs, supported by the Westland CVEs as required (according to their own competencies on the specific subject), is responsible for the final verification of the Maintenance Manual (PIM).

3 PROCEDURE FOR CLASSIFICATION AND APPROVAL OF CHANGES TO TYPE DESIGN AND REPAIRS

The procedures for the classification and approval of changes to the EH101 type design are those provided in C750-02-003.2A.
Drawings are issued according to procedure n. ER094.
Relevant aspect are worth highlighting as follows:

3.1 Change process

Type design changes are under the responsibility of the EH101 CPE; he originates the process, classifies the modification (Minor/B, Minor/A o r Major, according to C750-02-003.2A), approves the Type Investigation Process and makes the relevant declaration of compliance. The guidelines for classification criteria are outlined in Procedure 100-50-158.

In practice, the form NOTICE OF DESIGN CHANGE (NDC) is the tool used to handle the process. Where the NDC affects Westland work share, EH101 Project Engineer start the process through filling the sheet I of the NDC form.

The Type Investigation Process is managed by the Office of Airworthiness. Where the NDC affects Westland work share, Agusta AEs, defines the Compliance Investigation Program through filling the sheet II of the NDC form. This includes support from the relevant DO departments and suitable CVEs (according to their competence per para 1.1.3 for the Westland and to 100-50-175 for the Agusta ones); both Agusta and Westland personnel can participate in the Team.

Definition and approval of the Program follows that stated in the procedure 100-50-176.

Compliance demonstrations include tests, analyses, similarities, etc…; tests conducted in order to demonstrate requirements contained in the Investigation Program are managed according to Procedure 100-50-157. In particular, Westland laboratories are considered as external facilities and consequently managed according to procedure 100-50-157.

Compliance documents, approval procedures (internal and by the Authority) and privileges for the EH101 Program are the same as described in the Procedures C750-02-003.1 and C750-02-003.2A for all other aircraft.

3.2 Westland drawings and documents signature

The way to issue drawings and documents is described in procedure n. ISO 4.4; information on record keeping is contained in Chapter 5 of this Addendum.

Drawings: The EH101 CPE signs those drawings quoted in the NDC (installation and/or assembly drawings), as set out in Procedure C750-02-003.2A. All other drawings and documents e.g. ECOs to support the change are signed by Westland under the above mentioned procedure.

Documents:

Documents are issued according to procedure AWEOP001 and approved according to procedure AWEOP002.

Compliance statements in accordance with 100-50-176 may be used for that purpose.

3.3 Repairs

The EH101 CPE is responsible to classify and approve civil EH101 repairs along the lines provided by C750-02-003.2B and using the form NTR provided by PRO.FSE.19/96.
Both Agusta and Westland generated repairs are managed in accordance with such procedures.

4 PROCEDURE FOR CONTINUED AIRWORTHINESS

The process phases described in the Procedure C750-02-003.3 are applicable to the EH101 Program without any deviation. The main phases of the process are highlighted below.

4.1 Management of occurrences

The activities related to the management of "Continued Airworthiness" are under the responsibility of the EH101 CPE.

Occurrences can originate from:

- Civil operators
- Military users of the EH101 rotorcraft containing common features to the civil version.

The EH101 CPE is involved in all the service difficulties through the Procedure EQ131 "Serious Defect Signal". From that, the EH101 CPE selects those relevant to the EH101 civil Type Design.

The incidents are managed in accordance with the document AQ 13-05.

The accidents and serious incidents are managed in accordance with the document AQ 13-11.

4.2 Type design modifications

Whenever analysis of the occurrence results in a required change to the type design, paragraph 3 of this Addendum is applied.

4.3 Instructions to Production Organization

All data and information resulting from the analysis of EH101 occurrences and useful for Production Organization activities are transferred according to the requirements of Procedure C740-15 as per Chapter 7 of this Addendum.

4.4 Information to operators

The EH101 Program follows the requirements applicable to the other Agusta aircraft. In particular it is here highlighted that the applicable Procedure to issue Service Bulletins is 100-50-140. The work sharing arrangement between Agusta and Westland already accounts for Agusta responsibility for the preparation of civil Service Bulletins.

4.5 Airworthiness Directives (AD)

EH101 Airworthiness Directives are managed according to the Procedure C750-02-003.3.

5 PROCEDURE FOR RECORD KEEPING AND MANAGEMENT OF DATA

All relevant EH101 Program design information must be held or accessible by the Type Certificate Holder in order to provide the information required to comply with the requirements and to assure Continued Airworthiness.

EH101 Program design information must also be held or accessible within the whole Agusta / Westland Design Organization in order to make all departments aware of the applicable design data and able to carry out their activity of competence in the right context.

Specific methods are implemented to file properly drawings and documents. For all the aspects not described in this Chapter, Procedure C750-02-003.4 applies.

Management of documents issued by the integrated Agusta / Westland Design Organization and relevant to the Westland Production Organization is described in the Chapter 7 of this Addendum.

5.1 Drawings

- Drawing collection, storage and historical filing is guaranteed by the Agusta Filing Department “Data Management”. In particular:
- EH101 drawings issued by Agusta are stored in Agusta in conformity to the requirements of the Procedure C750-02-003.4. Such drawings are also sent to Westland according to Procedure ER119 “Data Exchange” and managed and stored in Westland in conformity to the Procedure DI ISO 16.1.130.1.
- EH101 drawings issued by Westland are sent to Agusta according to Procedure ER119 “Data Exchange” and managed and stored in Agusta in conformity to the requirements of the Procedure C750-02-003.4. Such drawings are also stored in Westland in conformity to the procedure DI ISO 16.1.130.1.

5.2 Technical documents

Different kinds of documents can be issued:

- For EH101 documents produced by Agusta Design, Procedure C750-02-003.4 remains applicable.
- EH101 documents produced by Westland containing demonstration of compliance to airworthiness and environmental requirements, due to the signature policy stated in paragraph 3, are filed to Procedure C750-02-003.4.
- EH101 documents issued by Westland not containing demonstration of compliance to airworthiness and environmental requirements are filed in the Westland SAP system, and copies made available in Agusta (Filing Department “Data Management”) according to Procedure DI.ISO.5.1.130.1.
- EH101 documents issued prior to the transfer of EH101 Type Certificate to Agusta are filed in the Westland SAP system and retained in accordance with procedure DI.ISO.16.1.130.1. They are provided to Agusta through access to Westland SAP.
- All NDCs related to EH101 changes are filed in the Agusta Panagon system (see C750-02-003.4).

The updates of the following technical documentation, relevant to the EH101 civil version, that is kept by Agusta in accordance with C750-02-003.4:

- NDC
- Service Bulletins reports (see 100-50-140)
- DOA procedures

are available in the Agusta Panagon system (NDC, DOA procedures) in the AgustaWestland intranet (Service Bulletin).

Technical reports that are kept by Agusta in accordance with C750-02-003.4, are made available to Westland upon request.

Westland procedures quoted in this addendum are made accessible to Agusta through the Agusta access to the Westland intranet.

5.3 Other documents

Other kinds of documents (for example, aviation regulations, standards, standards specification) necessary for the continued airworthiness of the civil EH101 are made available to Westland on Westland intranet.

6 PROCEDURE FOR EQUIPMENT QUALIFICATION

The requirements of Procedure C750-02-003.5 are applicable also for the EH101 Program. Westland also apply ISO 6.4 for the procurement of components.

Responsibilities are shared between Agusta and Westland according to the following table.

6.1 Responsibilities

The following table outlines the responsibilities for the main activities involved in the vendor equipment qualification process.

TASK	Responsible Function and level of responsibility	
	R	S
Issuing and updating of the complete EH101 Vendor Items List (VIL)	EH101 CPE	Airworthiness Office
Selection of Subcontractor	Procurement Department (Agusta and/or Westland)	Technical Area (Agusta and/or Westland)
Stipulation of Purchase Order	Procurement Department (Agusta and/or Westland)	Technical Area (Agusta and/or Westland)
Liaison with the Subcontractor and coordination of related tasks	Technical Area (Agusta and/or Westland)	Airworthiness Office
Issuing of Procurement Specification	EH101 CPE	Technical Area and CVEs (Agusta and/or Westland), Airworthiness Office
Submission to the AA and relevant coordination	Airworthiness Office	-
Equipment classification	EH101 CPE	Technical Area (Agusta and/or Westland)
Categorization of Qualification Process	Airworthiness Office	Technical Area (Agusta and/or Westland)
Approval of technical documents issued by the Subcontractor for showing of compliance with the PS under Agusta cover	Agusta and/or Westland design department and signature according to the Agusta procedure for	-

	signature of docs	
Verification of compliance with EH101 Certification Basis (documents and qualification activity)	CVEs (Agusta and/or Westland)	
Approval of DDP	Technical Area and Quality (Agusta and/or Westland)	

R = Prime Responsibility, S = Secondary Responsibility

7 COORDINATION BETWEEN DESIGN, PRODUCTION AND PRODUCT SUPPORT

The arrangement outlined in the Procedure C740-15 is valid regarding co-ordination rules applicable to Agusta DO and PO Departments involved in the EH101 Program.

Following paragraphs provide further information about Westland DO and PO Departments arrangement and regarding data exchange between Agusta and Westland.

7.1 Westland required links (DO to PO)

DO has to define towards Westland PO the following aspects:

- Transfer of Airworthiness Data relating to the design being produced:
  - Applicable technical data to allow production,
  - usage & maintenance instructions,
  - Service Bulletins,
  - Approval Information
- Management and Approval of Concessions/Deviations
- Configuration Control
- Identification of Responsibilities within the DO

Connections between the activities and applicable Procedures are described in the Figure 2.

7.2 Westland required links (PO to DO)

Westland PO has to define towards DO the following aspects:

- Supply Manufacturing Data
- Support the DO for Continued Airworthiness
- Advise the DO of any non-conformities
- Assist the DO with the conformance of test articles
- Management of Concessions/Deviations
- Configuration Control
- Identification of Responsibilities within the PO

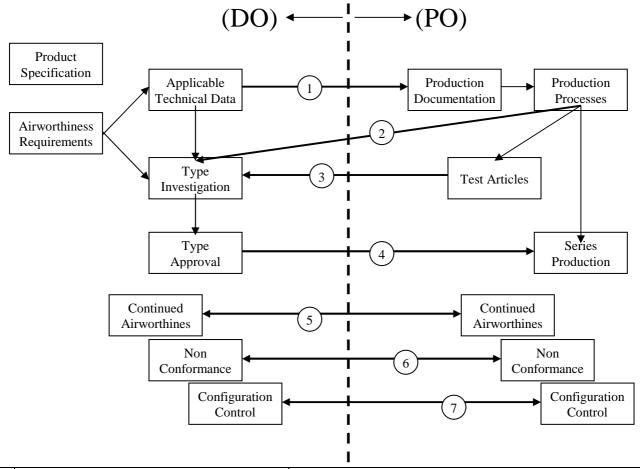
Connections between the activities and applicable Procedures are described in the Figure 2.

	TASKS	PROCEDURES
1	Drawings, specifications and other data to enable repeatable manufacture	ISO 4.4 Engineering Output (specifications, drawings, test procedures, etc) ISO 4.5 Design Verification & Validation ISO 9.3 Control Procedure for Critical Parts WHPS700 Control Procedure for Vital and Category F Parts
2	First Article Inspection	ISO 10.6 First Article Inspection WHPS700 Control Procedure for Vital and Category F Parts
3	Conformity of test articles	ISO 8.1 Product Identification and Traceability WHPS700 Control Procedure for Vital and Category F Parts
4	Approval status of applicable technical data	ISO 13.9 Control of Red and Blue Banded Components
5	Product safety, Service Bulletins, Vendor SBs, Repairs	ISO 4.1 Product Safety ISO 4.9 Production Quality Testing ISO 19.3 Technical Advice Service ISO 19.10 Engineering Support Services WHPS700 Control Procedure for Vital and Category F Parts
6	Concessions, production permits, etc…	ISO 13.1 Control of Non-Conforming Products and Containment/Corrective Action ISO 13.3 Assessment of Non-Conforming Materiel
7	Configuration Management	ISO 16.1 Control of Documents and Records

Figure 2

7.3 Agusta-Westland links

In order to assure the mutual availability of the information, the following links are established:

Drawings: Agusta PO is informed about the issuing of Westland drawings (new or revised) by Agusta Filing Department "Data Management". See paragraph 5.

Agusta PO is informed about the status of drawing approvals through the Agusta PANAGON system

Westland PO receives Agusta drawings (new or revised) from Agusta Filing Department "Data Management", according to the Procedures ER119.

Westland PO receives Westland drawings (new or revised) according to figure 2

Westland PO is informed about the status of drawing approvals (either Agusta or Westland) through the Agusta Filing Department "Data Management" that transmit every two weeks an update of the NDC. See paragraph 5

Documents: Information contained in documents issued by the DO and relevant for PO activities (for example: Standards, approved NDC, etc…) are exchanged between Agusta and Westland and available in both plants. See paragraph 5.

Furthermore, the Procedure ER051 establishes equivalences between Westland and Agusta standards, specifications and procedures in order to give an end product capable of the same performance.

Concessions: The concessions are managed through the existing procedure ISO 13.3. When a part is to be released to service as a spare part or as a change part, the personnel responsible for releasing the parts to service (EASA form 1) will make sure that any concession is closed and any major concession existing on the part is duly authorized by the EH101 CPE. The EH101 CPE is also responsible to make sure that the Agusta / Westland Product Support are aware of the need to make this check.

7.4 Points of contact

Focal Points for co-ordination between the integrated Agusta / Westland DO and other relevant Westland organizations are:
- The Westland Project Engineer who reports to the CPE for DO
- The Westland Operations Director for Westland PO and Part 145 for the release to service of spare parts

The EH101 CPE is responsible to make sure that the Westland Operations Director is aware of the above.

7.5 Resolution of conflicts

Areas of disagreement that may arise in dealing with interface matters should as far as possible be addressed at the local level.
When they are not able to find an agreed solution the problem will be reported to the HDO and the Westland Operations Director for resolution.

7.6 DO / PO approval status

The integrated Agusta / Westland DO and other Westland relevant organizations shall keep each other informed of their approval status and on any changes thereof.
The EH101 CPE is responsible to make sure that the Westland Operations Director is aware of the above.

8 PROCEDURE FOR QUALIFICATION OF SUBCONTRACTORS

C750-02-007 apply. In particular, the methods applied to qualify Subcontractors charged with the design of a part or equipment to be installed on EH101 Rotorcraft are described in the Agusta-Westland Document QRS01 "Quality Requirements for Suppliers". Particular requirements applicable only to Agusta or Westland are contained in the Associated Documents listed in QRS01A.

9 SYSTEM MONITORING PROCEDURE

System Monitoring activities described in Procedure C750-02-003.8 are wholly applicable to the EH101 Program. The System Monitoring annual plan for audits includes both Agusta and Westland Departments involved in EH101 activities. The audit plan shall be initiated and monitored by the AW Quality System, but may call on the Westland personnel nominated in C740-10 for activities that require to be undertaken on the Westland site.

9.1 Personnel

System Monitoring employs qualified personnel to conduct the audits; such people are competent to perform audits both in Agusta and in those Westland Departments involved in the EH101 Program. Local auditors are preferred for logistic reasons.

9.2 Audit performing and reporting

Procedure C750-02-003.8 provides the procedures for conducting the audits and reporting relevant results.

The forms used to report the results can be different (in the procedure they are in Italian language), but the contents shall be the same.

The meetings between Head of System Monitoring and HDO include discussion on EH101 audit results.

10 DAS PROCEDURES

The following is the list of the AW Engineering Organization procedures that are applicable to Agusta Spa and Westland Helicopters Ltd.

NUMBER	TITLE
AWEOP001	Management of AW Engineering Organization technical documents
AWEOP002	Signing of technical documents

The following is the list of the Procedure referenced in this Addendum and not included in the table of Procedure C750-02-003.9.
The applicability of the following procedures is identified in the Addendum paragraphs.
In case of doubt regarding the applicability of Westland procedures, the DOA Handbook Addendum prevails in dealing with the related products.

NUMBER	TITLE
EQ131	Serious Defect Signal
ER051	Equivalences Procedures, Materials and Processes
ER094	Engineering Change Order (ECO)
ER119	Data Exchange
ISO 4.1	Product Safety
ISO 4.4	Engineering Output (specifications, drawings, test procedures, etc)
ISO 4.5	Design Verification & Validation
ISO 4.6	Design changes
ISO 4.9	Production Quality Testing
ISO 6.4	The procurement and supply of Components for use on the EH101 510 civil variant
ISO 8.1	Product Identification and Traceability
ISO 9.3	Control Procedure for Critical Parts
ISO 10.6	First Article Inspection
ISO 13.1	Control of Non-Conforming Products and Containment/Corrective Action
ISO 13.3	Assessment of Non-Conforming Materiel
ISO 13.9	Control of Red and Blue Banded Components
ISO 16.1	Control of Documents and Records
ISO 19.3	Technical Advice Service
ISO 19.10	Engineering Support Services
DI.ISO.5.1.130.1	Document Control, Preparation & Management
DI.ISO.16.1.130.1	Quality Records
QRS01	Quality Requirements for Supplier
QRS01A	Requirements between Agusta and Westland
WHPS 700	Control Procedure for Vital and Category F Parts (applicable also for EH101 under the Agusta DOA extension)

The following lists the Agusta procedures referenced in this document that are applicable to Westland staff undertaking EH101 civil design work. Agusta will ensure that approved translations of these procedures are available at Westland. They are available from the Westland Helinet.

NUMBER	TITLE
Agusta DOA Handbook Sections	
C750-02-001	Part I General
C750-02-002	Part II Design Assurance System
C750-02-003.1	Type Investigation
C750-02-003.2A	Procedure for Classification and Approval of Changes to Type Design
C750-02-003.2C	Procedure for Approval of FC and Issue of a PtF
C750-02-003.2B	Procedure for classification and approval of design major repair
C750-02-003.3	Procedure for Continued Airworthiness
C750-02-003.4	Procedure for Record Keeping
C750-02-003.5	Procedure for Equipment Qualification
C750-02-003.6	Coordination between Design and Production, list of the arrangements
C750-02-003.7	Procedure for the qualification of sub-contractors
C750-02-003.8	System Monitoring Procedure
C750-02-003.9	DAS Procedures
Procedures	
C740-15	Agreement DO-PO
100-50-140	Service Bulletins management
100-50-157	Inspection and Tests in Civil Certification Processes
100-50-158	Guidance criteria for the classification of changes to Type Design
100-50-173	Design Organisation: Professional Requirements for Management Staff and Certifying Personnel
100-50-175	Compliance Verification Engineers (CVE) and Airworthiness Engineers (AE): Scope of Responsibilities, Operating Procedures
100-50-176	Conformity with Airworthiness Standards and Type Approval Program: Preparation and Management
100-50-194	Authorized Technical Expert (ATE) – Sustaining Engineer (SE)
AQ 13-05	Occurrences reporting and management process
AQ 13-11	Accidents and serious incidents reporting and management process
PRO.FSE.19.96	Repairs design, management and approval
C740-10	Organismo del System Monitoring della Design Organisation